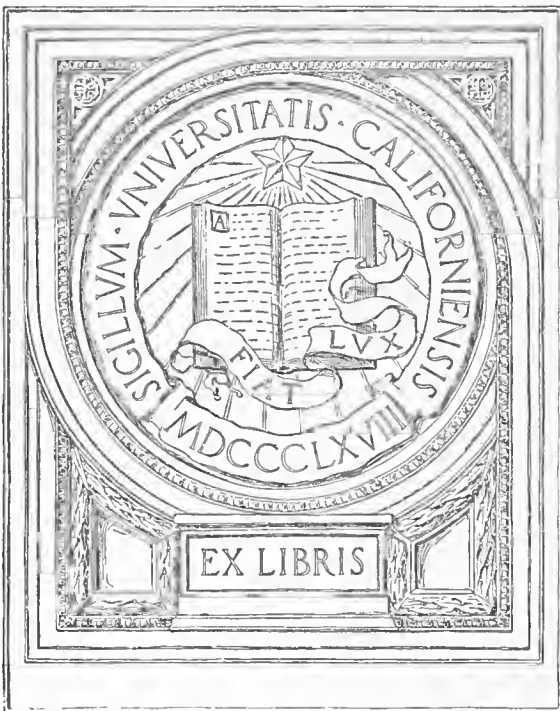


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- VI. Medical History articles.
- VII. Miscellaneous columns.
- VIII. California Medical Association.
 - (a) General.
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- IX. Department of Public Relations.
- X. Cancer Commission.
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Key to Abbreviations in This Index

- Or.—Original article.
C. R.—Case Report.
B. M.—Bedside Medicine.
E. C.—Editorial Comment.
C. N.—Clinical Notes.
L. M. H.—Lure of Medical History.

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BOOK REVIEWS

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BOOKS RECEIVED

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otolaryngology, Laryngology, Hygiene, and other topics of interest. By Leading Members of the Medical Profession Throughout the World. Edited by Louis Hamman, M. D., Visiting Physician, Johns Hopkins Hospital, Baltimore. Volume IV, Forty-Third Series, 1933. Cloth. Pp. 317. Philadelphia: J. B. Lippincott Company, 1933.

A Manual of Diseases of the Nose, Throat, and Ear. By E. B. Gleason, M. D., LL. D., Professor of Otolaryngology, Medical-Chirurgical College Graduate School of Medicine, University of Pennsylvania, Philadelphia. Seventh Edition, Revised and Entirely Reset. Cloth. Pp. 651, with 261 illustrations. Price, \$4.50 net. Philadelphia: W. B. Saunders Company, 1933.

Voluntary Motherhood. A Discussion of the Various Contraceptive Methods, with Emphasis on Generally Approved Techniques. By Antoinette F. Konikow, M. D., Author of "Physicians' Manual of Birth Control." Paper. Pp. 36. Price, 50 cents. Boston: Buchholz Publishing Company, 1933.

The Pregnant Woman. By Porter Brown, M. D. Cloth. Pp. 174, illustrated. Price, \$2. New York: Eugenics Publishing Company, 1933.

Sex Habits. A Vital Factor in Well-Being. By A. A. Buschke, M. D., and F. Jacobsohn, M. D. Translated from the German by Eden and Cedar Paul. Foreword by Gerard L. Moench, M. D., New York Postgraduate Hospital (Columbia University). Cloth. Pp. 204. Price, \$2.50. New York: Emerson Books, Inc., 1933.

Interesting New Books

HYPNOSIS AND SUGGESTIBILITY.
By Clarke L. Hull \$3.75
INTRODUCTORY LECTURES TO PSYCHOANALYSIS.
New series by Sigmund Freud \$3.00
NERVOUS BREAKDOWN. Its Cause and Cure. By W. Beran Wolfe \$2.50
THE DIAGNOSIS OF NERVOUS DISEASES. By Purves-Stewart \$10.50

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BOOK REVIEWS

Nervous Breakdown—Its Cause and Cure. By W. Beran Wolfe. Pp. 240. New York: Farrar and Rinehart. 1933. Price, \$2.50.

This book, which is written from an Adlerian viewpoint, has a cocksureness about it which is oftentimes advantageous to patients if not carried too far and if one is upon solid ground. The psychoneuroses and their treatment at the present day, however, are debatable ground and one must not be too sure of anything.

One might easily find an opening for disagreement with the author in his treatment of homosexuality as "one symptom of a sexual neurosis. . . . It is not based on any prenatal or congenital factor. . . . Like all other neuroses, it is an acquired strategy of living which is based on a childhood conditioning factor."

The optimistic attitude toward cure of inversion, reminds one of a similar attitude taken years ago by Schrenck-Notzing, and which he was later compelled to abandon.

E. W. T.

Obstetrical Nursing. By Carolyn Conant Van Blarcom. Third edition. Pp. 651. Illustrated. New York: The Macmillan Company. 1933.

This is the third edition of Miss Van Blarcom's book, revised to fit the most modern point of view. It is a splendid work, succeeding admirably in setting forth clearly and completely the principles and details of obstetrical nursing. At the present time, nursing education is undergoing considerable change, the tendency being to require more preliminary education, to demand more academic work during the training period, and to place less and less emphasis on bedside nursing. The amount of paper work, charts, reports and whatnot required of the modern student nurse is simply staggering. The problem of teaching nurses is not an easy one. The wisdom of moving away from bedside nursing is open to serious question. However, it is a fact, the pros and cons of which need not be argued here. The point is that at present instruction of nurses is confined principally to brief, often necessarily incomplete, exposition of various medical subjects without particular effort to define the rôle which the nurses are to play. Nursing texts with which I am familiar foster this idea. They are usually written by doctors and are merely short works on the various branches of medicine. The nursing aspect is often omitted completely.

These facts have been mentioned for the sake of contrast. Miss Van Blarcom is a nurse, and has taken particular pains to write about nursing care. She brings out

clearly the relation of nurse to patient, the possibilities which the nurse has to engender the proper mental attitude in the patient, the necessity for sympathetic understanding, for adaptability, and tells clearly what details of nursing, what procedures may be necessary throughout pregnancy, labor, the puerperium, and their complicating conditions. Miss Van Blarcom not only sets forth the actual detail but gives the rationale, thus emphasizing the importance of seemingly commonplace procedures. She considers also delivery in the home, care of the newborn, certain community aspects of obstetrical care, not from the doctor's point of view, but from the nurse's.

One further praiseworthy feature is that no one procedure is prescribed. Variations in technique of different doctors and different obstetrical hospitals are brought out, while attention is always focussed on the fundamental principles which underlie these variations. The student nurse may soon learn that valuable lesson that there is more than one "right" way to do a thing.

The book is perhaps a little longer than need be. Treatment of the anatomy of the pelvis and genitalia, the physiology of pregnancy, the mechanism of labor, etc., are adequate but might have been simplified. More illustrations in these sections would make it easier for young women who have not had the advantages of studying anatomy for a year to understand.

Not only nurses but doctors owe a debt of gratitude to Miss Van Blarcom for her excellent book. It would serve well as a model for other nursing texts.

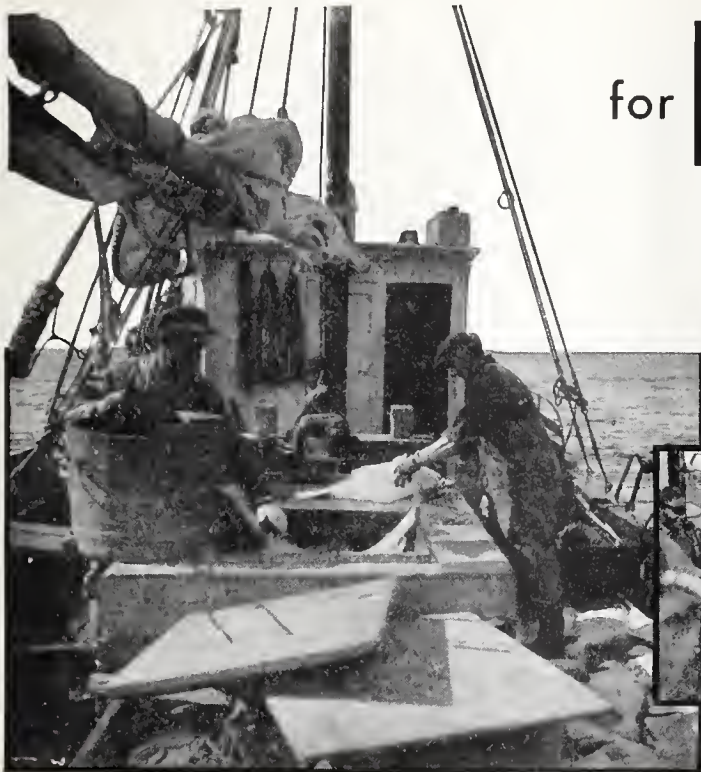
D. G. M.

Fractures. By Paul B. Magnuson. Pp. 466. Illustrated. Philadelphia: J. B. Lippincott Company. 1933.

This book is based upon the author's own long and extensive experience, written by a man who knows well whereof he writes and whose mind evidently recalls vividly those significant details of diagnosis and treatment which have impressed him in his own work. His book should be particularly valuable to the younger practitioner whose experience has not been sufficiently extensive to provide him with an effective method of dealing with the fracture emergencies which may confront him at any time.

Even the most experienced of fracture surgeons will find in Doctor Magnuson's book many interesting and helpful suggestions which have arisen out of the strong individuality and mechanical genius of its writer. Those who may look to the book for a learned discussion of a great multitude of different ways to attack a fracture problem will be disappointed. The greatest value of the book lies in the care and completeness with which one or two reliable methods of dealing with any certain fracture are

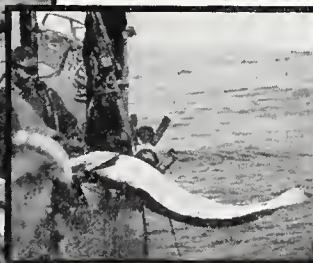
(Continued on Page 14)



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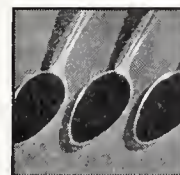
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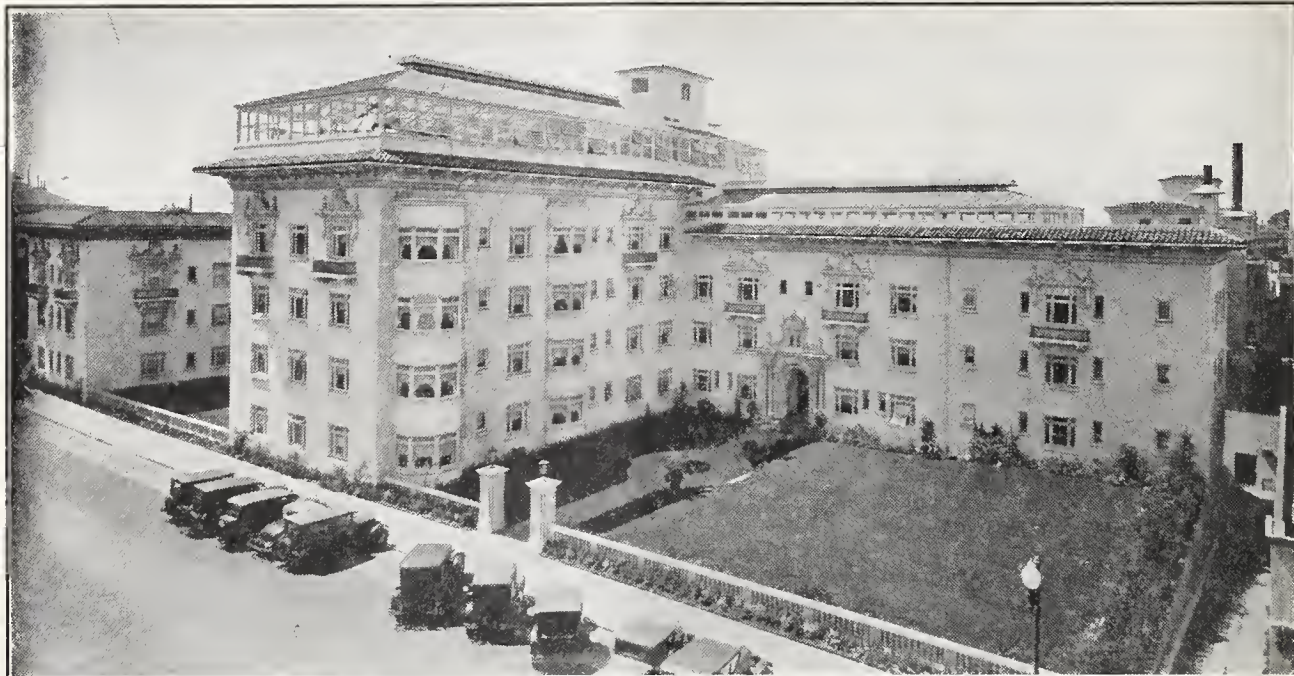
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BOOK REVIEWS

(Continued from Page 12)

taken up and followed through. This instinct for the significant detail is particularly apparent in the chapter dealing with injuries of the spinal column and skull. Another manifestation of the author's characteristic determination to follow through to a satisfactory conclusion, is the chapter on physiotherapy and exercise treatment. It is a book well worth the while of any man who is interested in skeletal injuries.

E. W. C.

Behind the Doctor. By Logan Clendening. With illustrations from contemporary sources, portraits, photographs, and original drawings by James E. Bodrero and Ruth Harris Bohan. Pp. 458. Illustrated. New York: A. A. Knopf, 1933. Price, \$3.75.

In his latest book, "Behind the Doctor," Dr. Logan Clendening gives us a fascinating account of the progress of medicine from prehistoric times to the present day. He traces the advance in knowledge which attended the principal discoveries in the fundamental sciences upon which medicine is based, but gives something that is even more interesting: an insight into the lives and motives of the man who made the discoveries. The book is a judicious blend of biography and medical history, a series of vivid pictures of a long line of investigators who have probably been the greatest benefactors of the human race. To him these men are a "great throng of old ghosts," but how he succeeds in conjuring them to life for us! They march across his well-set stage, make their bows, address us in the language of their times or take their places and begin to operate, as the case may be.

It is a book we can recommend, without reservations, to laymen interested in the history of medicine.

We are living in an age of popular outlines, of history, of science, of philosophy. Some of them accomplish their purpose very well. In our own field, however, we have seen bacteriology endowed with all the glamour and noise characteristic of an African lion hunt. We have seen the mysteries of metabolism laid bare for popular inspection, perhaps a little prematurely, and while these performances are not as dull as the textbooks, the subjects are not treated with the dignity we feel belongs to even a popular work on a scientific subject. Doctor Clendening's book does not suffer from this defect.

It is true that in chemistry* and biology† we have had authentic and scholarly accounts which nevertheless

offered the laymen an attractive vista of these sciences. In medicine until this book appeared, we have not. Now there is available in a single volume the essence of a whole medical library done in a manner that is entertaining, yet obviously the work of a scholar and a scientist.

What a debt of gratitude the future medical student will owe the magician who has so adroitly marshalled this company of noble "ghosts" for him. The time the student spends in medical school is so short and there is so much that must be learned, it is impossible to go deeply into how and by whom, the knowledge was gleaned. By reading this volume he can rapidly orient himself.

Doctor Clendening has not only done the students and his contemporary colleagues a great service, but he has also done the public a great service. His book is not propaganda for the academicians, but a tart reminder that much of what is now useful knowledge was gleaned by extramural workers of but little standing in their communities and times. Presenting this fact to students, cannot fail to make for a better perspective.

This book comes at a particularly opportune time. So many medical problems await the invention of a new method of approach—something not yet imagined but comparable in importance to the microscope or the vacuum tube. These problems call urgently for solution. But the practitioners of medicine in this age of tumult are often too much embroiled in the economic and social uncertainties to address themselves efficiently to the work nearest to their hearts. How inspiring then to turn the covers of this magnificent book and find that the great triumphs of the past have been wrested from yet more harassing backgrounds!

G. N. H.

TWENTY-FIVE YEARS AGO

(Continued from Text Page 72)

From an article on "The Treatment of Croupous Pneumonia" by Dr. William Watt Kerr of San Francisco.

This discussion of the treatment of croupous pneumonia will be facilitated by the preliminary statement that its object is to offer the suggestion that possibly our results would be better if we did not attach quite so much importance to the condition of the lung, but bestowed more attention upon an attempt to alleviate the constitutional effects of a pneumococcic toxemia. . . .

(Continued on Page 17)

* Jaffe, Bernard: "Crucibles," 1930 (Simon and Schuster).

† Locy, William A.: "Biology and Its Makers," 1908.

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TWENTY-FIVE YEARS AGO

(Continued from Page 14)

In Memoriam: Dr. Frank Lemuel Adams.—Was there ever a kindlier, bigger-hearted, good-natured soul than Frank Adams? Who that has attended the meetings of the State Society for the last few years, will soon forget his kindly, welcoming smile, his whole-souled friendliness that wrapped him about as with a garment of sincerity? With him, nothing was too much to do for a friend—and who was not his friend? If he had an enemy in the world, that one had never the face to let the fact be known. The story of his good deeds and his open-hearted charity will never be told, for he alone could have told it—and he never did; his right hand never knew what his left hand gave away or to whom it was extended in help. The sunshine of the gods was in his heart and the cleanliness of his life and of his mind was as that of a little child. As some of us trooped wearisomely over to Oakland in the dreadful days of April, 1906, we turned first to Frank Adams; and everything that he had was ours—without the asking. It is a big and a rare man who can give all that he has and make himself trouble and inconvenience in the giving, and still do it in a manner that makes you feel you are doing him a favor. The good Lord alone knows why he makes so few men like Frank Adams.

Doctor Adams was born in Troy, New York, in 1858; he died very suddenly, of heart disease, at his home in Oakland on the night of November 20, 1908. He was graduated from the University of California in 1881, and in 1883 was graduated from Cooper Medical College. He held many positions in medical societies, and was president of the California Medical Association, 1904-1905, presiding at the meeting held at Riverside in April, 1905.

Southern California Medical Society.—The fortieth semiannual meeting of this very flourishing society

was held at Santa Ana, December 2 and 3. The attendance was large, in spite of the weather, which was rainy, and the meeting was in every way a successful one under the presiding hand of Dr. Frank Garcelon, and the executive guidance of Dr. Joseph M. King, the secretary.

BOARD OF MEDICAL EXAMINERS

(Continued from Text Page 72)

The Los Angeles Southern California Grocer's *Journal* of November 9, 1933, related that the Appellate Department of the Los Angeles Superior Court recently reversed the conviction of George A. Sims of practicing medicine without a license. The article stated: "Sims was said to have told a police officer that he performed abortions and that he was a licensed physician. A vanity case filled with surgical instruments was introduced into evidence, as well as a receipt for \$10 from a woman who said she had been attended by Sims. . . ."

Dr. Frank A. Northrup, arrested in Santa Monica on charges of violation of the Harrison Narcotic Act, is serving a six months' sentence in the Riverside county jail, according to the Santa Monica *Tribune* of November 5, 1933. Doctor Northrup has been cited to show cause why his license to practice medicine in this state should not be revoked.

Press dispatches from Boston, Massachusetts, announce the arrest of Thomas G. Aved on a robbery charge. Assertedly found in his possession was a diary detailing robberies committed in various cities across the continent. The records show that Aved, who is licensed by the California Board of Chiropractic Ex-

(Continued on Next Page)



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BOARD OF MEDICAL EXAMINERS

(Continued from Preceding Page)

aminers and the Board of Barber Examiners, was given two years' probation in 1925 following his arrest in Fresno, California, on a charge of burglary based upon the theft of a saxophone from the Fresno High School.

A recent opinion by Attorney General U. S. Webb holds that chiropractors who advertise themselves as foot correctionists do so in violation of Section 17 of the Medical Practice Act.

Chiropractors in California would not be affected in their practice by the passage of a "basic science" examination law, according to an opinion rendered December 3, 1933, by Attorney General U. S. Webb, whereas osteopaths would be required to take such a basic science examination.

"Dr. Harry Soferenko, Santa Monica physician, yesterday was acquitted of a charge of perjury at the close of his trial in Superior Judge Baird's court. The physician was accused of giving false testimony in behalf of Joseph Rosenthal when the latter was tried and convicted of robbery two months ago." (Los Angeles Times, December 6, 1933.)

"Changing his plea from not guilty to guilty of violation of the State Medical Practice Act, Joseph B. Wall, self-asserted doctor, was fined \$100 yesterday afternoon by Justice of the Peace L. E. Newton. . . ." (Chico Record, November 16, 1933.) (Previous entries, June and December, 1933.)

"Warrants charging conspiracy to perform an illegal operation were served on Dr. J. E. Folsom and his nurse, Viola Warner. The warrants were sworn to by the father of a nineteen-year-old girl, who was a patient at a hospital Doctor Folsom operates at 3849 Grove Street, Oakland. . . ." (San Francisco Chronicle, November 16, 1933.)

On November 6, 1933, the Appellate Court, Second District, Los Angeles, rendered a decision sustaining the action of the Board of Medical Examiners taken July 10, 1930, revoking the license of Francis James Bold. A similar decision was rendered sustaining the board's revocation of the license of Paul S. Traxler, October 24, 1929. Both of the revocations were based upon alleged illegal operations. The decisions were printed in California Appellate Decisions, Vol. 75, pp. 428 and 433. (Previous entries: Bold, July and December, 1930; February, 1931; August, 1932. Traxler, June and September, 1929; December, 1930.)

On November 6, 1933, the Appellate Court rendered a decision sustaining the judgment of Superior Judge Robert B. Lambert, denying Maximilian L. Herzig a Writ of Mandate to compel the Board of Medical Examiners to issue him a California reciprocity certificate. (California Appellate Decisions, Vol. 75, p. 435.) (Previous entries, October, 1930.)

Louis J. Bogo, licensed chiropodist, is said to have pleaded guilty on November 14 in Municipal Court, Los Angeles, to a charge of violation of the Medical Practice Act and was sentenced to serve sixty days in the city jail. Sentence was suspended, and he was placed on probation.

(Continued on Page 21)

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BOARD OF MEDICAL EXAMINERS

(Continued from Page 18)

Walter H. Britt, licensed barber, on December 8, 1933, pleaded guilty in Municipal Court of Los Angeles on a charge of violation of the Medical Practice Act and was given a ninety-day suspended jail sentence. He was said to have been treating, among others, a Los Angeles woman for cancer.

The Criminal Identification Bureau reported recently found in a sack concealed in a lumber yard at Roseville, California, a number of surgical instruments, ophthalmoscope, three leather cases containing various vials of pills (mostly Upjohn products), an emergency hypodermic set, etc. These articles were evidently stolen from some doctor, who may possibly read this notice.

On November 23 Ben Kebrick, charged with violation of the Medical Practice Act in Los Angeles, is said to have pleaded guilty and was sentenced to pay a fine of \$100, of which \$50 was paid and \$50 suspended.

Reports relate that Anna Smith on November 17, in the Justice Court of Anaheim, pleaded guilty to a charge of violation of the Medical Practice Act and was given a sixty-day suspended jail sentence, on condition that she not again be charged with violation of any criminal law.

Tsuneyoshi Koba, featured in the 1929 annual report of the California Board of Medical Examiners as attempting to foist fraudulent credentials, was reported

recently discovered under the name of Akira Matuzaki, holding a Junior Fellowship in Surgery in the Presbyterian Hospital, New York City. Despite the exposé of Koba, printed in *The Journal of the American Medical Association*, August 1, 1931, page 339, he continues to fool the public. (Previous entries, February, 30; September, 1931; March, 1932.)

Carl F. Wieduwilt, reported by our Investigation Department as a former contractor and interior decorator, who purchased an alleged cancer cure for \$500 and thereafter opened a cancer clinic known as the Special German Cancer Clinic, is said to have pleaded guilty on November 22, 1933, in the Municipal Court of Los Angeles, on a charge of violation of the Medical Practice Act and was sentenced to serve sixty days in the city jail, sentence being suspended and defendant placed on two years' probation on certain specified terms.

R. T. Wilkerson, charged with violation of the Medical Practice Act on November 23, is reported to have pleaded guilty in the Municipal Court of Los Angeles and was sentenced to pay a fine of \$100 or serve twenty days in the city jail, sentence being suspended and defendant placed on probation.

J. H. Williams, reported as one of the individuals connected with the "Pacific Medical Institute," Los Angeles, is said to have pleaded guilty on September 19 to a petty theft charge and sentenced to ninety days in the city jail, sentence being suspended on condition that he pay back the money obtained by fraud from different individuals, in connection with the operation of the "Pacific Medical Institute."

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A Plea for Better Nursing Care.—"When Is the Private Hospital Liable for Negligence of Its Nurses?" which appears in the November *Modern Hospital*, is in reality a plea for capable nursing. This article may well be studied by hospital and special duty nurses in their attempt to inaugurate a shorter working day, thereby eliminating excessive fatigue on the part of the nurse, and insuring better nursing care for the patient.

"Although much has been written concerning malpractice generally, little is found concerning the legal responsibility of a hospital for the acts of its nurses. Many hospitals find it valuable to give their nurses a series of short lectures on their legal responsibility. Since, according to the familiar legal maxim, ignorance of the law excuses no one, it is of great importance that nurses realize the serious legal consequences that may result from an act of even the slightest negligence. Nowhere, perhaps, may an act of negligence have such serious consequences as in a hospital, and it may be for this reason that courts and juries are especially strict in dealing with such cases. . . .

"In keeping with the recent trend in the law toward the greater protection of social interests, and with a realization that to hold hospitals liable for money damages is a far more effective legal stimulus in enforcing high standards of care than is the mere enacting of legislation, the courts are becoming severe. In view of this attitude of the courts, it becomes the duty of hospital authorities to educate employees to exercise the highest standard of care in the performance of their duties so that funds may not be wasted in litigation."

The Red Cross Meets the Challenge of the Times.—The American Red Cross has for years played a leading part in health education and child welfare. Its public health nursing and home hygiene service has done much for the betterment of health in the home, the school, and the community. Vast gains have been

made everywhere in the development of water safety and curtailment of serious results from accidents of all kinds because of the ever-growing popularity of Red Cross instruction in first aid and life-saving.

As the authorized administrator of Congress' gift to the unemployed of 85,000,000 bushels of wheat and 844,000 bales of cotton, the Red Cross, faced with the colossal task of converting these raw materials into finished products and delivering them into six million homes, carried out the greatest unemployment and disaster relief project ever committed to it. In technical and merchandising details alone, the administrative expense to the Red Cross was \$780,000. Except for volunteer efforts of approximately one million men and women who lent their assistance at every step of the gigantic undertaking, the costs would have been prohibitive. All over the land, women met in Red Cross workrooms, as in the World War days, to sew textiles into clothing. In all, 104,000,000 garments were made. Men helped in investigating needs, in warehouse checking, and in the delivery of flour and cereals into the homes of the unemployed. Children of the Junior Red Cross, Boy and Girl Scouts, 4H Clubs, and juvenile organizations of every kind also lent a hand. Because of this nation-wide cooperation, 25,000,000 individuals were fed, clothed and refreshed in spirit.

Notwithstanding the unparalleled demands of the wheat and cotton distribution upon its resources, the routine activities of the Red Cross went on undiminished. Last year's total of disasters was unusual, both in number and violence. Every section of the United States was visited during the twelve months by some type of nature's fury. Disasters totaled ninety-six—an average of one every five and one-half days.

That the Red Cross was able to feed, clothe and house the refugees and rehabilitate whole communities has been due to its support by the American people.

Memberships pledged during the annual Roll Call, Armistice Day to Thanksgiving, make possible the continuance of its service.—*Health News*.

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The Nutritive Superiority of Bread Versus Fads.—Under the title, "The Truth Concerning the Vitamins, Minerals, Whole Wheat and White Breads, Balanced Diets and Dental Bills," Dr. J. W. Read of the Division of Chemical Research gave a most interesting paper before a recent gathering of chemists. In the course of his remarks, the speaker took time to correct numerous erroneous and misleading statements that have been made by self-appointed dietitians and health reformers.

Doctor Read emphasized the nutritive superiority of white bread over whole wheat bread as a constant article of the diet. This was definitely shown by many sad experiences resulting from the world-wide feeding tests during the late war. The European nations which compelled their millers to convert 85 to 100 per cent of their wheat into flour in order to make the grain go farther, found their population at the close of the war in a state of general gastro-intestinal disturbance because of the continued consumption of the coarser indigestible material in their breads. When the Armistice was signed, the public and the medical profession demanded a return of the white flour of pre-war days.

If one knows that he has the digestion of a goat, he may consume great gobs of bran, sawdust, hayseed, seaweed, or indigestible wax, and handle it without much inconvenience, but only a few folks appear to have a compound several-chambered stomach designed for cud chewing. The dairy cow greatly loves to exercise her four-chambered stomach on bran and other difficultly digestible feeds, and she is thoroughly capable of extracting the minerals from roughage and returning them to the dining table in nutritious whole milk. Mother Nature equipped man with a single cavity stomach and never did intend that he should compete with the giraffe, goat, and dairy cow in the consumption of roughage.

There is no reason under heaven why man should adopt the dietary habits of a guinea-pig just because

cabbage is rich in vitamin C, or restrict his diet to nuts because squirrels do not have appendicitis. The introduction of white flour brought in no new ills of mankind. The stature, strength and health of modern man are far superior to his more or less distant ancestors who consumed whole grain and natural foods just about as nature made them. The whole history of sports is nothing less than a history of broken world records.

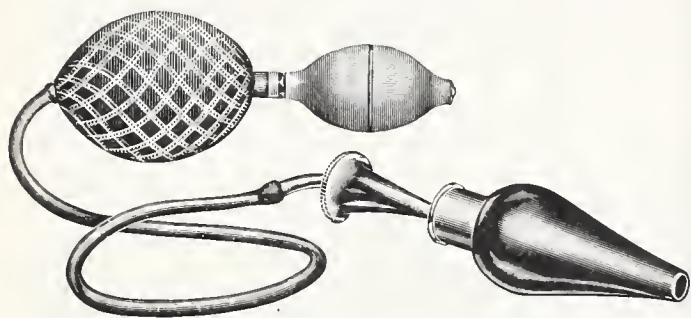
The allied soldiers in the trenches ate white bread for the soundest of scientific reasons and they won the war. Every cult which has been hatched up to point its accusing but ignorant finger at white bread, finds itself today without the support of a single scientific reason.—*Food Facts.*

How to Give Cod-Liver Oil.—Some authorities recommend that cod-liver oil be given in the morning and at bed time so as to assure an appetite for the oil, while others prefer to give it after meals in order not to retard gastric secretions. If the mother will place the very young baby on her lap and hold the child's mouth open by gently pressing the cheeks together between her thumb and fingers while she administers the oil, all of it will be taken. The infant soon becomes accustomed to taking the oil without having its mouth held open. Mead's Newfoundland Cod-Liver Oil, of minimum acidity, and prepared from fresh healthy livers, is well tolerated by infants and children and is palatable without flavoring.

If given cold, cod-liver oil has little taste, for the cold tends to paralyze momentarily the gustatory nerves. As any "taste" is largely a metallic one from the silver or silver-plated spoon (particularly if the plating is worn), a glass spoon has an advantage.

Mead's 10 D Cod-Liver Oil is made from Mead's Newfoundland Cod-Liver Oil. In cases of fat intolerance the former has an advantage, since it can be given in one-third to one-half the usual cod-liver oil dosage.

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Apple-Grower Jury Upholds Prosecution for Poison Spray.—A jury composed of five apple growers and seven others who possess first-hand knowledge of apple-growing methods recently found the Washington Dehydrated Fruit Company, Yakima, Washington, guilty of a violation of the Federal Food and Drugs Act in shipping interstate stocks of apple scrap which carried residues of poisonous lead and arsenical sprays, according to John L. Harvey, assistant to the chief of the Western District of the Federal Food and Drug Administration. Approximately 46,000 pounds of the adulterated scrap had been seized by the Government. The product was shipped by the Yakima concern to a dealer in St. Louis, Missouri. Prosecution of the shipper was concluded early in October in the United States District Court at Yakima, which is in the heart of the Northwest apple region.

Although apple scrap in its original state is not used as human food, it is commonly used in making dried-apple butter and pectin jelly, which are human foods. It has been well established that arsenic and lead, commonly used in sprays for fruits and vegetables, can be carried over from the scrap into the manufactured apple butter or apple jelly. The presence of these poisons constitutes a definite menace to the health of consumers, and under the pure food law renders the product containing them subject to action on the ground of adulteration.

Eminent pharmacologists and toxicologists called by the Government testified that the quantities of lead and arsenic found by the Administration analysts in the shipments of scrap unquestionably constituted a menace to public health.

"The decision in this case," said Mr. Harvey, "unquestionably should set a precedent which will ease the burden of the Government in successfully prosecuting future cases involving interstate shipments of fruits and vegetables carrying residues of poisonous chemical sprays."

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Pioneer in Tuberculosis Control Dead.—Professor Albert Calmette, assistant director of the Pasteur Institute and a leader in tuberculosis control, died on October 29.

After completing the study of medicine in Paris in 1886, Doctor Calmette began his professional career as a naval surgeon. He took part in several campaigns in China and the East Indies, where he began research which led to the discovery of specific means of combating the effects of snake bite, cholera, and rabies.

Recognizing his ability, Pasteur in 1895 placed him at the head of the institute at Lille, where he occupied the chair of bacteriology. There, with Doctor Guérin, he studied means of controlling tuberculosis and with him discovered the *Bacillus Calmette-Guérin*—generally referred to as BCG. The formula for BCG anti-tuberculosis vaccine—the result of twenty years' experimentation—was announced before the Academy of Medicine, Paris, on June 25, 1924.

The new vaccine was accorded increasing recognition by scientists until 1930. In that year seventy-six children died and 167 developed tuberculosis after vaccination with the serum at the Luebeck Hospital Laboratory, Luebeck, Germany. Both Professor Calmette and the vaccine were completely absolved, however, following investigation by the Reich, which resulted in a decision that the preparation used had been contaminated by active tubercle bacilli in the laboratory. (*New York Times*.)

While scientific research has not been sufficient to warrant health authorities in giving their unqualified approval of BCG, contemporary investigators, particularly in this country, are continuing studies in the hope that its value may be established. Whether or not it is proved ultimately to be of the value predicted by Professor Calmette there is little question but that he, like Pasteur, will live forever in the minds of those concerned with the protection of the health of the people.—*Health News* (New York State Department of Health).

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HE supreme question which the Times puts up to people today is to decide whether they wish most to give or to get; to serve mankind or to exploit it; whether they will choose the career where they can do most good tomorrow, or take the job that pays best today; whether they prefer the cutthroat methods of competition, too prevalent in business, or the co-operative methods by which science, the other great institution of the modern world, has been built up. Both individual and group selfishness must be transcended, and nothing less than a new dispensation of service and a new enthusiasm for humanity must be instituted. This will begin not by concerted or organized movement from without, but can take its rise only within the soul of each individual man who dedicates himself to service, and has penetrated the great secret of the human heart, that

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GIVE THAN TO
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"Sleeping Sickness" (Lethargic Encephalitis).—The real name of this condition is "encephalitis lethargica." The very name "encephalitis" denotes uncertainty. The encephalon means the inside of the head. Therefore, encephalitis means inflammation or disease inside the head. The inside of the head is a very complicated structure; there are so many different parts in the cranium, it is very indefinite just what part is affected. For example, the three-layer covering of the brain and spinal cord are, collectively, called the *meninges*. Inflammation of the *meninges* is called *meningitis*. This term limits consideration to the one structure, so that special features can be outlined and interpreted.

Having thus explained the disease itself in the simplest possible terms, in a recent issue of the *Dayton Health Bulletin*, Dr. A. O. Peters, health commissioner of that city, remarks that the term "sleeping sickness" itself is a misnomer. Of course, he says, this disease

gets the name from the fact that the patients early become comatose. But there is a type of encephalitis in which the mental condition is the opposite of coma. These patients become maniacal, violent, and need strong sedatives to keep them restrained. And so while the name "encephalitis" lacks definiteness, at least it is a better term than "sleeping sickness." . . .

Usually, however, the encephalitis patient rather early sinks into coma. Early in his influenza attack, he complains of unusual headache, stiffness of the neck, and soreness of the muscles. He often has a characteristic twitching of the eyes. A characteristic feature is the fact that these patients often have mental symptoms early, with little or no fever. In one fatal case the earliest and only suspicious symptom was a silly expression on the face. Also, the facial expression had just the faintest suggestion of flippancy, not usually found in the sick. In this case the coma was slow in

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developing, but within a week he sank into a coma and the disease was fatal within another two or three days. That little, silly grin and laugh, which was so unnatural, meant volumes the first time he was seen and proved the forerunner of a fatal issue.

Just what does cause "sleeping sickness"? The same confusion exists in discussing what agent actually causes sleeping sickness as we encounter in discussing poliomyelitis. It is generally believed that some strain of the streptococcus is the causative agent.

However, whatever may be the actual germ that causes this sickness, it is definitely proved the germ enters the body through the nasal passages. It may be carried and spread by persons who have not had the disease, and is also carried in the nasal passages of very mild recovered cases. The germ is expelled into the air in droplets of mucus in the acts of coughing, sneezing, laughing and talking. Therefore, a person who may be exposed to the disease should frequently use a nose and throat spray prescribed by his physician.

Whether it also enters through the gastro-intestinal tract has not been determined. This possibility should also be kept in mind.

Summary

1. It does no good to try to run away from an epidemic.
2. All persons possibly exposed to "sleeping sickness" should use an approved nose and throat spray regularly.
3. Where there is a patient with "sleeping sickness," no flies should be allowed to get out of the room. They may be carriers.
4. Isolation of the patient should be absolute. Even the attendant should not be permitted to leave the room, but provisions should be brought for both patient and attendant. The room to be occupied by the patient should be individually screened.—*Ohio Health News.*

Dangerous Eyebrow and Eyelash Dyes.—The action of Dr. Shirley W. Wynne, Health Commissioner of New York City, in prohibiting the manufacture, sale or use of eyebrow or eyelash dyes which are known to contain harmful ingredients, was commended today by Lewis H. Carris, managing director of the National Society for the Prevention of Blindness.

"If only one woman in New York City should be spared the tragedy of blindness through Doctor Wynne's prompt order as soon as this menace to eyesight was disclosed, his action would be entirely justified," said Mr. Carris. "In a city as large as New York—with its thousands of beauty parlors patronized by perhaps a million or more women—the chances of injury to eyesight, if there is no law against the use of ingredients known to be harmful, are quite obvious."

Tuberculosis Record for 1932.*—Progress in the reduction of the death rate from tuberculosis continued during 1932 with gratifying results. The average death rate for fifty-nine American cities, with some 33,000,000 population, reached the lowest figure on record, or 56.3 per 100,000, compared with 174.4 in 1910, or twenty-three years ago. It will be thirty years in 1934 since the National Tuberculosis Association was formed, having for its chief purpose the deliberate reduction of the tuberculosis death rate on the basis of comprehensive investigations as to causative factors and improvement in the diagnosis and treatment of the disease.

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The reduction since 1910 reflects in a large measure deliberate public health policies of the several states corresponding to similar reductions made in civilized countries the world over. In brief, while the population of our large cities has increased approximately more than 50 per cent during the last twenty-four

* By Frederick L. Hoffman, LL. D., consulting statistician.

(Continued on Next Page)

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(Continued from Preceding Page)

years, the actual number of deaths from tuberculosis has been reduced about one-half. This result challenges the admiration of mankind and suggests even more determined efforts to bring the remainder of the mortality under control. But regardless of the progress that has been made, the annual loss of life from pulmonary tuberculosis alone represents some 75,000 deaths, the further reduction of which will tax the ingenuity, the skill and the resources of the nation to the utmost.

It is shown on the basis of official data furnished in advance by health officials of various cities that the tuberculosis death rate has decreased in 115 cities, increased in sixty, and remained the same in two. It must, of course, be kept in mind that there are two outstanding factors which complicate the local analysis of tuberculosis mortality, namely, the racial factor on the one hand, and the concentration of tuberculosis

patients in certain localities due to climatic advantages on the other. This explains the very high death rate of certain communities particularly such as El Paso, Texas, which shows the highest rate for the year or 201.3 per 100,000. In El Paso the factor of the Mexican element also goes far to complicate the situation, just as this is the case in San Antonio, which shows a rate of 119.5. Fourteen cities had rates in excess of 100 per 100,000.

In many southern cities the death rate is increased by the negro population. The negro continues to show, as a rule, more than twice the death rate for pulmonary tuberculosis, due largely to racial factors and partly to environmental conditions. Our understanding of the peculiar susceptibility of the negro to tuberculosis has been materially advanced by an extremely interesting and valuable paper on "Tuberculosis in Negro and White Race" by Dr. Franklin R. Everett, Henry Phipps Institute, Philadelphia, pub-

Plans for 1934—

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lished in the *American Review of Tuberculosis* for May, 1933. The paper is summarized in the following important conclusions.

"1. The anatomical characters of tuberculosis in the American negro differ widely from those of the white people of the same community.

"2. Tuberculosis pursues a more rapidly fatal course in the negro than in white people; widespread tuberculous pneumonia with rapid excavation of the lung is more frequent and formation of fibrous tissue is less conspicuous in the black than in the white.

"3. The adult type of pulmonary tuberculosis, which is prevalent in white adults, occurs in only half of the instances of pulmonary tuberculosis in negroes but pursues in them a more rapid course.

"4. The childhood type of pulmonary tuberculosis with caseous tuberculosis of tracheobronchial lymph nodes occurs in nearly half of negro adults but in only a small percentage of white adults who had died from pulmonary tuberculosis.

"5. In more than half of the negro adults with the childhood type of pulmonary tuberculosis the lesion has its origin in the apex of the lung.

"6. Latent apical tuberculosis occurs considerably less frequently in negroes than in white adults."

The preceding conclusions are fully sustained by my investigations of mortality problems of the Ameri-

can negro during the last forty years and first presented in my *Race, Traits, and Tendencies of the American Negro*, published in 1896. . . .

. . . The British Ministry of Health in 1932 published an extremely interesting report on tuberculosis, including an examination of the results of sanatorium treatment, by Dr. Arthur S. MacNalty, which should be consulted by all who wish to grasp the true significance of the modern tuberculosis movement in all its important aspects. The report calls attention to the actual decline in tuberculosis in England and Wales from a mortality of 58,930 in 1901 to 37,990 in 1929. Standardized death rates declined during the same period from 180.7 per 100,000 to 93.2. The report shows that for 1926 the male rate was 116 per 100,000 for London and only 60 per 100,000 for aggregate rural districts. The rate for females was sixty-four for London and fifty-six for the rural districts.

SOURCES OF INFECTION

The report discusses the various sources of infection, particularly the inhalation of wet or dried particles of expectoration, tuberculous milk, food, etc. It includes a discussion on the problem of heredity, racial predisposition, pregnancy, prolonged lactation, family infection, etc., which cannot be enlarged upon for the

(Continued on Page 34)

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TRANSURETHRAL PROSTATIC RESECTION*

A GENERAL ESTIMATE AND A SPECIAL STUDY
OF TWENTY PHYSICIAN-PATIENTS

By GERSHOM J. THOMPSON, M. D.
Rochester, Minnesota

DISCUSSION by J. C. Negley, M. D., Los Angeles; Robert F. Day, M. D., Los Angeles; Wiley B. Wesson, M. D., San Francisco.

TRANSURETHRAL prostatic resection has withstood the test of time. It is no longer in the experimental stage of development; in fact it has long since displaced prostatectomy except in an occasional case.

Within the last two years, I have performed the operation in more than two hundred cases, and have been intimately concerned with the post-operative care and results in at least as many more in which the resection was performed by my associates in the Section on Urology at The Mayo Clinic. Therefore, I can relate unlimited details of these cases in proof of my contentions, but must, for the sake of brevity, make categorical statements which will be subject to doubt. The opening statement stamps me as an enthusiast, and many conservative physicians will probably smile forgivingly and murmur, "Just wait a while." Nevertheless, I shall still be enthusiastic, for only through such an attitude can an ultra-conservative tendency be somewhat counteracted.

RECENT EXPERIENCES

Each week I see patients who have been told that this procedure has been condemned and abandoned by the medical profession. Fortunately news, both good and bad, spreads rapidly, and the results of prostatectomy for years have made laymen none too happy when a member of the family has become afflicted with prostatic disease; similarly a neighbor's quick restoration to health following transurethral resection has often helped to overcome criticism of the procedure by an uninformed physician. Despite warnings, many old men have visited the clinic in the last year demanding a punch operation and refusing to sub-

mit to anything else, thus forcing extension of the method to include resection in cases of even the most extensive prostatic hypertrophy. Strange to say, a similar attitude has developed in the minds of afflicted physicians, as is evident from the records of The Mayo Clinic for 1932, when twenty physicians underwent transurethral resection. The large majority stated specifically that they wanted that operation and none other; the others hoped fervently that it would be applicable, and it was applicable, without exception. From 1925 to 1931, fifty-five physicians, or an average of seven and eight-tenths a year, underwent prostatectomy at the clinic. The proportion of physicians to the total number of patients treated surgically increased from 3 per cent, during the years of prostatectomy, to 7.2 per cent, now that transurethral resection is being employed. There is no doubt in my mind that any physician who is familiar with the literature or, better still, who has witnessed the operation and postoperative course of patients who have submitted to transurethral resection at the hands of competent surgeons, would choose the transurethral operation for himself, without the slightest hesitation.

CRITICISMS OF THE OPERATION

Critics of this operation say that it is a dangerous and unsurgical procedure; unsurgical because a large mass of tissue is removed by morcellation through an opening not sufficiently large to allow visualization of the entire field of operation at one time, and dangerous because control of hemorrhage is inadequate and urinary extravasation frequently occurs. Less bitter opponents of the procedure concede its virtues in dealing with the small cicatricial type of prostate gland, with median bars, and possibly in cases in which little hypertrophy of the lateral lobe exists. Some authors who advocate the operation still insist that careful selection of cases is necessary, but fail to give a definite method of selection, or description of the types of glands which they think suitable for resection. Others are of the opinion that it is an operation which will find its future as a prophylactic measure against subsequent prostatic hypertrophy in cases in which obstructive urinary symptoms are beginning. I shall not argue against these various statements, but shall merely call attention to the fact that most of the critics betray themselves by conceding that the method is ap-

* From the Section on Urology, The Mayo Clinic, Rochester, Minnesota.

* Read before the Urology Section of the California Medical Association, at the sixty-second annual session, Del Monte, April 24-27, 1933.

plicable in cases in which even hypertrophy is advanced if the patients constitute poor surgical risks. If the operation is applicable in such a case, then why should it not be applicable to the patient with extensive prostatic hypertrophy who otherwise is in excellent physical condition? From my experience I unhesitatingly say that the method is applicable, and is the one of choice in any case in which a resectoscope can be passed.

Patients with the most extensive hypertrophy can thus be treated. In the last eight months only two patients have been seen at the clinic for whom, because it was impossible to introduce the instrument, prostatectomy was performed. The operation can be performed with relative safety on the patient who is in extremely poor general condition. Patients with heart-block, angina pectoris, severe coronary sclerosis, diabetes, cirrhosis of the liver, asthma, extensive carcinoma of the prostate gland with metastasis, marked obesity, and severe renal injury with values for urea as high as 381 milligrams, were subjected to transurethral resection in the last year. Thus, many men who had been condemned to drain their urine by catheter, or to have a permanent suprapubic stoma for periods up to seven years, were again made able to void freely.

PHYSICIANS WHO WERE TREATED IN 1932

Twenty physicians submitted to transurethral resection in 1932 and their cases were carefully studied. None of these operations was done as a prophylactic measure for early obstruction, or because of few symptoms; physicians are unwilling to submit to an operation if it can be safely avoided. Since prostatectomy was not done during the year on a physician, it can be seen that there was no selection of cases. The youngest physician was fifty-two years of age and the average age was sixty-two and seven-tenths years.

The patients had suffered from obstructive symptoms of the urinary tract for an average of four and a half years, some for as long as twenty years. Sixty per cent gave histories of attacks of complete urinary retention requiring catheterization for relief, whereas others admitted that their obstructive symptoms had become so alarming that they never went far from the office without carrying a catheter. The prostate gland would be graded as large in all but three cases, in one of which complete urinary obstruction was present and the patient was wearing a suprapubic drainage tube, despite the fact that the gland was small. All of the patients had residual urine, the majority of them more than three ounces (90 cubic centimeters) and 25 per cent had complete retention. It would seem, therefore, that this was an average representative group of cases by which to test the merits of the operation.

ANATOMICAL INDICATIONS

Since the prostate glands were rather large, they represented the safest type, in my opinion, on which to operate. It might seem at first thought that the smallest glands would be most suitable, but I do not believe that this is true. The wall of the bladder of the patient with early prostatic

hypertrophy is usually thin, and there is no thickening of the trigone such as is seen in more advanced obstructive disease. Hence, a deeper incision than was intended might result in perforation into the perivesical or periurethral tissues, or possibly into the rectum. After a moderately long period of prostatic obstruction the wall of the bladder practically always thickens, and this thickening is usually accompanied by trigonal hypertrophy, as well as by subtrigonal prostatic hyperplasia. Consequently, it is possible to resect much deeper than is actually necessary without harm. Therefore, the inexperienced surgeon might well select for this operation the case in which enlargement is moderate, and carefully consider the risk in cases in which hypertrophy occurs early, and in which few obstructive symptoms are present.

A careful study of bladders removed at necropsy from patients dying of other causes convinces me that if one resects in the area necessary to relieve the obstruction, there is in any case of actual prostatic hypertrophy a good margin of safety. One need not fear the possibility of urinary extravasation if perfect visualization is obtained, and if one has had sufficient experience to be familiar with the topography of the neck of the bladder.

PROCEDURE WHICH WAS USED

In preparing the twenty physicians for operation, it was necessary to perform preliminary cystostomy in one because of severe cystitis and pyelonephritis, the urine being very purulent. Another physician came with cystostomy already performed. In similar cases in which it is felt that drainage of the bladder preliminary to operation on the prostate gland will be necessary for an extraordinarily long period, we do not hesitate to make a suprapubic stoma. This was done in fifty-two (18.8 per cent) of the 276 cases in which prostatic resection was performed in 1932. Five of the physicians who had been using catheters on themselves intermittently were permitted to continue that practice for a few days until roentgenograms and examinations of the blood could be made. Fortunately, fever or other evidence of infection from the catheter did not develop in any case. The benefit of the so-called vaccination produced by such reactions has been overestimated; logically, such infection should be harmful. Thirteen of the physicians had no preliminary drainage by catheter other than that necessary to establish the fact that residual urine was present. Thus, 65 per cent of them had no preparation other than the forcing of fluids a day or two prior to operation, and the usual preoperative enemas and medication. This is an even greater percentage than in the entire group of 276 patients on whom operation was performed during the year, 124 of which operations (44.9 per cent) were done following a similar regimen.

It is natural, I suppose, that a physician should want to choose the anesthetic employed on himself. For that reason a few were given nitrous oxid and a few sacral block anesthesia. I prefer spinal anesthesia, never using more than 100 milligrams of procain, and often as little as 50

milligrams, injected between the third and fourth lumbar vertebrae. Infiltration of the prostate gland is impractical and hardly merits mention.

Following administration of the anesthetic, the resectoscope should be introduced with little trauma, and the type of obstruction determined. The choice of instrument is a personal matter and of secondary importance to the ability of the surgeon to remove the obstructing tissue. Some men prefer direct vision instruments. Luys³ stated: "I cannot too much insist upon the fact that direct vision cystoscopy is preferable to every other, for it alone permits any therapeutic action to be direct and harmonious without any intermediary." Needless to say, most of the advocates of lens instruments do not agree with this, nor should they, if they cannot use direct vision instruments. The knife punch with multiple needle electrode, which is commonly employed at The Mayo Clinic, has been previously described by Bumpus,^{1,4} whose efforts have stimulated the suggestions of various workers in the Section on Urology, and have led to the development of the present improved form of instrument.⁴ At the Clinic most types of the various resectoscopes are available, and they have been used in more than fifty cases; but the use of the knife punch is preferred, for it can be used in spite of profuse bleeding, thus making it possible to remove a considerable amount of tissue in a minimal time.

All of the intravesical projecting tissue should first be excised, for it is almost always the principal cause of the obstruction. This is done as shown in Figures 1 and 2. The anterior half of the trigone can be safely cut away, and the portions of the lateral lobes which protrude intravesically should be excised, so that the floor and lateral walls of the bladder are flush with the prostatic urethra, leaving no projecting nodules in the region of the internal sphincter. The veru-

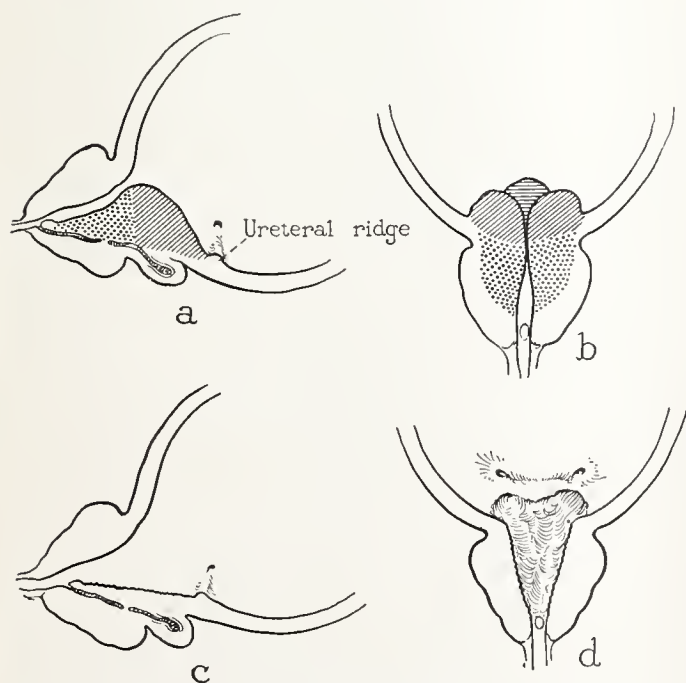


Fig. 1, *a* and *b*. The obstructing prostatic tissue, respectively in sagittal and in anteroposterior section. The intravesical tissue is indicated by the diagonal lines, and the intra-urethral tissue by dots; *c* and *d*, the obstructing tissue, has been cut away.

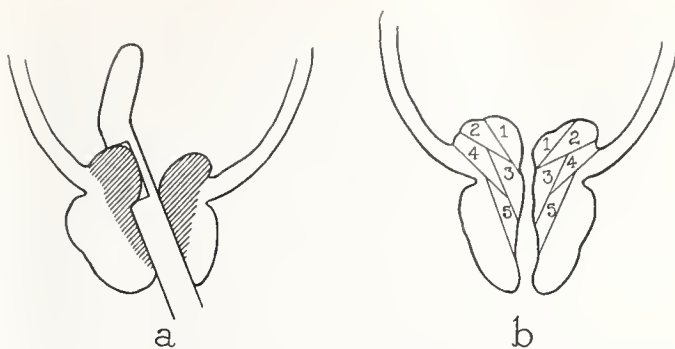


Fig. 2, *a*. Engaging an intravesical portion of the tissue; *b*, order in which pieces of tissue are removed.

montanum and ureteral meatus and ridge are the landmarks which guide the surgeon. If he incises within a region confined between their positions, he will not, in the ordinary case, get into difficulty. I wish particularly to emphasize that the removal of all of the intravesical tissue, particularly any remnants on the posterior vesical lip, is most important. The amount of intra-urethral tissue it is necessary to resect varies according to the type of enlargement. A good channel through the prostatic urethra will suffice; in fact it is inadvisable to resect as widely as possible. My opinion in this is similar to that of Caulk, who stated:² "The importance of urethral encroachment, except in the rare instances of intra-urethral lobules, valves or scars, is greatly magnified in the rôle it plays in obstruction."

The average weight of the tissue removed from the twenty physicians was 10.7 grams, and from one a total of 41 grams was resected. Microscopic examination of the removed tissue revealed adenofibromatous hyperplasia in all but four cases; one of these gave evidence of carcinoma, while in the other three the tissue was inflammatory.

POSTOPERATIVE CARE

When the operation is completed, a No. 24 soft rubber catheter should be fastened in the urethra, and through it the bladder must be irrigated often enough to prevent formation of blood-clots. When all venous oozing has stopped, irrigation twice a day will be sufficient. It is my practice to remove the catheter at the end of forty-eight hours. In the large majority of cases there will be no trouble in voiding; catheterization six hours after removal of the inlying catheter, fifty-four hours postoperatively, usually discloses no residual urine. If, however, more than five ounces (150 cubic centimeters) of urine is retained in the bladder, and obstructive symptoms persist, careful intermittent catheterization, or reinsertion of a retention catheter, will forestall the fever and toxemia which might otherwise result. If difficulty in voiding persists, a second operation usually is done within seven to ten days. This was necessary in 10 per cent of the group of physicians; 90 per cent were entirely relieved by one operation. In not a single case in 1932 was prostatectomy either necessary or performed because of failure of transurethral resection.

These illustrations have been published in the Proceedings of the Staff Meetings of The Mayo Clinic, and will be published in the *American Journal of Surgery*.

In these cases there has been surprisingly little postoperative reaction. Only a few of the physicians had temperatures higher than 101.5 degrees Fahrenheit. The period of hospitalization varied from three to twenty-seven days; the average was seven days. The average total duration of the stay in Rochester was fifteen days. This short period of stay in the hospital and absence from work is very important to a physician. With few exceptions it is just as important to anyone else, and if such results can be accomplished for an unselected group of cases in which all types of hypertrophy are presented, such as occurred among the twenty physicians, it seems to me that the desirability of the method for the layman must be admitted, except in rare cases.

COMMENTS

The method, as I said before, is not in the experimental stage. It is now the surgeon's responsibility to acquire cystoscopic skill and that familiarity with the topography of the neck of the bladder which results from perfect visualization and exact knowledge of the surgical pathology of the prostate gland. He can, then, after learning the rudiments of the technique of transurethral resection, operate with a lower mortality rate than can the prostatectomist. The surgeon who is not sufficiently experienced to do good cystoscopic work must either acquire the experience, or else perform prostatectomy despite its higher mortality rate. Death from transurethral resection in my experience, and that of my colleagues, has been rare. In the last six years there have been only seven deaths, a mortality rate of 1.4 per cent, and one consecutive series of 291 patients, including these twenty doctors, was operated on without a fatality.

With no exception, the twenty physicians were relieved of their obstructive urinary symptoms. One physician, who could void an excellent stream at the time of dismissal, had residual urine of less than two ounces (60 cubic centimeters). The unstinted expressions of appreciation received in recent letters must have been inspired, in some instances, by the recollections of the days of prostatectomy. All of those who wrote insisted that, if necessary, they would again submit to transurethral resection rather than to any type of prostatectomy.

The question of recurrence seems to be settled by results in a series of 499 cases in which operation was performed between January 1, 1927, and January 1, 1933; there were eleven recurrences, or an incidence of 2.2 per cent. One might argue that it is too soon to quote exact figures concerning recurrence in cases in which the glands were large. I agree, but it is my firm belief that in the future the percentage of recurrence during, say, a period of five years, will be considerably less than the percentage of immediate death noted in the past from prostatectomy. Also, I believe that the percentage of deaths during the five-year period among aged patients, from causes not related to the urinary tract, will be higher than the percentage in which urinary obstruction will recur. Furthermore, I have no doubt that the

incidence of persistent or recurrent urinary distress of any kind will be far less following transurethral resection than has been noted for years following prostatic enucleation. If these predictions prove true, prostatectomy, like prosperity, has had its day. There is a bare possibility of both coming back, but never in their former glory.

The Mayo Clinic.

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DISCUSSION

J. C. NEGLEY, M. D. (527 West Seventh Street, Los Angeles).—Discussion of this subject is difficult from two standpoints. First, taking the author literally when he says, "Therefore, I can relate unlimited details of these cases in proof of my contentions, but must for the sake of brevity make categorical statements which will be subject to doubt." Obviously, since details are absent, statements categorical and subject to doubt, one cannot affirm or deny, except in a categorical manner. Second, so much has been written on this subject in the past two years that little remains to be said.

From May, 1931 to July, 1933, some 149 papers have been reviewed (incidentally a greater number of like papers than were written in all the time previous). Bransford Lewis in the *Urologic and Cutaneous Review* for January, 1933, analyzes some of the current literature, and recites the following complications or adverse results: Failure of relief, with repetition one or more times, 65. Excessive hemorrhage (primary or secondary), 45. Slough, with bladder perforation, 6. Suprapubic cystotomy for hemorrhage or removal of prostate, 25. Other complications, 63. Deaths, 87. None of the above are quoted in the paper under discussion, except a mortality rate of 1.4 per cent and recurrences of 2.2 per cent.

My experience with this method is divided into two periods—the first, from 1923 to 1927, with ten personal cases in which a bar, contracture or small middle lobe, was destroyed by ordinary bipolar coagulating current.

In collaboration with my associate, W. B. Parker, we operated in eight cases with the original Stern resectoscope (incidentally, the first time it was used on the Pacific Coast, to the best of my knowledge). Then came seventeen personal cases with the Collings electrotome. With reluctance, I abandoned these methods because the instruments (urethral and electric energy) were inadequate, and because frequent complications such as hemorrhage, infection in the field, with slough and absorption of toxic products and pyelonephritis made necessary reoperation and shock. With the advent of the Day, McCarthay, and Kirwin punches, I performed a few operations of this type, but soon put the punches aside, as apparently their originators have also done. Since the advent of the newer type of urethral instruments, such as those of McCarthay, Stern-Davis, and Kirwin, with their component electrical energizers, I have either operated on, or had under more or less direct observation a total of 359 resections, both in charity wards and private hospitals. Some of the adverse happenings have been: hemorrhage (immediate or remote), 16; ruptures of the bladder, 9; mortality rate (charity hospitals), 10.2 per cent; mortality rate (private hospitals), 7.2 per cent; pyelitis and nephritis, 11; uremia, 9; incontinence, 1. Reoperated for ruptured bladder, hemorrhage or failure of result, 16. Death from shock, with coagulation of psoas and lumbar muscles, 2. In the remainder of the above cases, results, on the whole, have been brilliant in that the patients have left the hospital much

earlier (average days, 14.8), with urination reestablished earlier, and absence of shock. Removal of fear of operation and an expense-saving process for the patient have resulted.

In a corresponding length of time, 515 prostatectomies and 41 Young punch (open bladder) patients have been studied, with a combined mortality rate of 12.5 per cent in charity hospitals, and 4.9 per cent in private hospitals (average days in hospital, thirty-eight). Complications incident to, or resulting from the surgery were: hemorrhage, 2; septicemia, 1; uremia, 2; pyelonephritis, 4; and ileus, 2.

The author makes one statement with which I am not in accord, namely: "Patients with heart-block, angina pectoris, severe coronary sclerosis, diabetes, cirrhosis of the liver, asthma, extensive carcinoma of the prostate with metastasis, marked obesity and severe renal injury with values for urea as high as 381 milligrams were subjected to transurethral resection in the past year." By inference at least he would have us believe that this class of patients would be suitable for resection, when most of us would consider them not suitable for observation cystoscopy. I believe that for the rank and file of the profession to follow the above would lead to more grief than pleasure.

In conclusion, I believe that the nearer we approach the cold knife or cold punch with our cutting current, and the less coagulation or fulguration is done, the nearer the approach to the perfect result. Despite past experience and study, many will use the resectoscope; but each time we must know exactly where we alight, so that we may break the fall to some extent.

The author and his colleagues are to be congratulated on the excellent results in general, which have not been equaled or even approached by any published reports to date; illustrating the necessary requisites for such results, namely enthusiasm, diligent application, skill, experience, and, above all, a sufficient number of cases in a clinic where pre- and post-operative care are of the highest degree of efficiency.



ROBERT V. DAY, M. D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Thompson's paper supplies us with abundant data for discussion. At the outset, it must be conceded that his statistics are accurate and cannot be contested. As to his conclusions and inferences, some are irrefutable; but in others I feel that there is room for a considerable difference of opinion.

So far as the relief of urinary obstruction is concerned, there is no question that in most instances this can be accomplished by transurethral prostatic resection. Obstruction being the most serious and vital factor in prostatism, we might feel that when the patient was free from any considerable hindrance to urination—that is to say, with a residual not to exceed one ounce (or none at all)—our result was as good as that following a well-performed prostatectomy. Unfortunately, however, this is not the case in actual clinical experience. A very considerable percentage of these patients who have undergone resection are afflicted with irritation symptoms for long periods. This explanation, I believe, is quite apparent. The hypertrophied median lobe, which in most instances is the real cause of the obstruction, can easily be resected, thereby allowing the patient to urinate readily. On the other hand, resection of the lateral lobes is an unsatisfactory procedure. It is literally impossible to resect the major portion of the lateral lobes transurethrally, that is to say, to really excise these lobes to a point near the capsule and from the vesical aspect down to the apex, without incurring a considerable risk. Remaining portions of the lateral lobes continue to hypertrophy and give rise, clinically, in many cases to urinary irritation of considerable degree. Even when resection is performed on a hypertrophied median lobe with only the slightest enlargement of the lateral lobes, one usually discovers in a few weeks that the laterals have enlarged markedly; due, no doubt, to the stimulation by the cauterization and ensuing infection at the site of the resected area. The method of Bumpus, which Doctor Thompson employs, results in less tissue

sloughing and periprostatic reaction, and consequent irritation symptoms and growth stimulation, than does the radio loop employed in other types of resectoscopes. With radio-loop resectoscopes it is undeniable that a rather extensive periprostatic exudate and ultimate fibrosis result. This may include the seminal vesicles. With the type of resection employed by Doctor Thompson, which was devised and perfected by Doctor Bumpus, the tissue to be removed is first transfixed by needle electrodes and electrodesiccated by means of a d'Arsonval current in order to forestall bleeding, whereupon it is excised with a circular cold steel blade. This method was first employed and embodied in the Day prostatic punch, which instrument is now being modified so that larger bites may be taken in the instances where quite large prostates are attacked. Either the direct or foroblique telescopic vision employed in this instrument affords a splendid perspective. The tendency to periprostatis is much less noticeable when this method is employed.

My feeling is that, whereas most any type of prostate can be successfully resected with a negligible mortality and satisfactory relief of the purely obstructive symptoms, still many of these patients are more or less miserable, which is not the case after a well-performed prostatectomy. The mortality rate is about the same when each is performed by men of outstanding experience and skill in each of the respective procedures. But when a prostatectomy has been done, the patient is entirely well, whereas after a resection a considerable percentage have symptoms of irritation which makes life somewhat miserable. I fear that many of the resected cases will necessitate later prostatectomies or repeated resections. The time has been too short to enable us to determine that question. These cases to which Doctor Thompson refers and reports results after a five-year period, were cases of minor resections, and are not at all comparable with those we are doing nowadays.

Doctor Thompson in his paper, and even in the title of his paper, makes a point of the number of physician patients. Of course, we all know that physicians are prone to take short-cuts in order to dodge what would and should be done with other patients. This was most forcibly brought home to me a few years ago in that, immediately following a description of the Day punch in *The Journal of the American Medical Association*, I was the recipient of a series of letters from physicians all over the country describing various types of prostatism from which they were suffering, and anxious for a urologist to tell them that a punch operation would relieve them of their prostatic ills.

We are hoping that, in lasting end-results, resection will enable us to deal in constantly increasing percentages of cases of prostatism. But after a considerable clinical experience, as well as observation of many cases done by others, and some internationally famous resectionists, I am convinced that we had better wait two or three more years before discarding the operation of prostatectomy.



MILEY B. WESSON, M. D. (490 Post Street, San Francisco).—Doctor Thompson has casually mentioned several points which are worthy of our serious contemplation. I would hesitate to believe that his concluding statement, "Prostatectomy, like prosperity, has had its day," was correct, for if it is true, then the urologists, as a class, have lost their place in the sun. Urology is a young specialty. Until the introduction of the cystoscope and the development of the pre-operative prostatectomy technique, all genito-urinary work was done by the general surgeons and the venereologists. Gradually, due to the activity of high pressure salesmen, cystoscopes have become almost as common in the general practitioner's armamentarium as sphygmometers, and commercial houses are now circularizing the entire profession almost weekly to buy, at bargain prices, some form of resection machine. The urologists should consider seriously the effect of giving up their prostatectomy operation, upon both their patients and their specialty, before being swept off their feet by this commercial propaganda.

The phenomenal success of Hugh H. Young as a prostatectomist is based upon three factors: a profound knowledge of perineal anatomy; surgical technique and an appreciation of the importance of pre-operative care. The same factors are correspondingly important in prostatic resection. Hence, the cases that Doctor Thompson does not "prepare" must be in perfect condition when he first sees them.

There are proportionately no more hypertrophied prostates and median bars in the United States today than there were ten years ago. Outstanding urologists worked for years accumulating a series of one hundred or more prostatectomies, but now practically every man who had the price to buy a resectoscope a year ago has already one hundred or more resections to his credit; some hospital operation schedules show almost as many resections as tonsillectomies. It seems to me that there must be a lot of unnecessary "prostate shaving" going on by the unethical, who prate of how much easier it is to "sell" a patient a resection than a prostatectomy. Unfortunately, anyone who can look through a cystoscope thinks that he is competent to do a resection; consequently we have a rising group of "prostatic surgeons," devoid of training in surgical technique, advancing heretical opinions.

The type of anesthesia used varies with the operator. Dr. John R. Caulk of St. Louis for years has depended upon local anesthesia; and Dr. Julius Fischer of Kansas City and Dr. W. M. Wishard, Jr., of Indianapolis have devised very ingenious needles for novocain infiltration of the prostate that are widely used.

We should all profit from Doctor Thompson's observation that the patients who have long suffered from back pressure are the safest to learn upon, since the hypertrophy of the bladder wall and the trigon lessens the danger of perforation; also that the neophyte had better practice on median bars rather than glandular hypertrophies, as the danger of hemorrhage is less.

One of the reasons for the remarkable success of Doctor Thompson and his colleagues is that they are operating with practically the same instrument with which they do all of their bladder and kidney investigations—a Braasch cystoscope that has been converted into a modified Young's punch by notching the shaft and adding a circular knife. Furthermore, they are meticulous in their attention to postoperative asepsis, and they do not do a lot of massive coagulating and carbonizing to stop hemorrhage. The average urologist uses a Brown-Buerger right-angle cystoscope for his routine work, and has never catheterized a ureter with the McCarthy direct forward vision foroblique penendoscope. Although he uses it for examining the prostatic urethra, he is more or less lost in a bladder with that instrument. However, he introduces the McCarthy resectoscope, orients himself in the prostatic urethra, makes the first cut, and a hemorrhage immediately blurs his field. He then burns wildly with a powerful coagulating current from a spark-gap machine, trusting that he will hit the bleeders, and he usually carbonizes not only the bed of the cut but the surface of the venous trigon that he caused to bleed as he jockeyed his loop into position. He is rarely again oriented throughout the operation, and frequently excises both ureteral orifices. Untoward complications, ranging from pyelonephritis to prostatic abscess or perforation, follow as a matter of course.

A man who is going to do resections with the McCarthy resectoscope should do all of his ureteral catheterizations with the foroblique panendoscope. He should get his cutting current from a tube machine. If there is a severe hemorrhage following a cut, instead of coagulating at random, he should press the sheath of his instrument over the bleeding area, or put in a bag and wait ten minutes for the bleeding vessels to clot. If hemorrhage continues at the end of the physiological clotting time, he can then seal the vessel with the coagulating current and continue with the operation.

Prostatic resection is a very valuable procedure. It is a Young's punch operation, with the danger of hemorrhage minimized; but, as frequently done, the

destruction of tissue from excessive coagulation (carbonization) is really more dangerous than hemorrhage. The man who is not trained in surgery should depend exclusively upon some form of intra-urethral resection (McCarthy, Bumpus, Kirwin, etc.). The urological surgeon, however, should not forget that large hypertrophies can be removed much quicker and with less shock by open prostatectomy (perineal or suprapubic), and that few men have been as successful with resections as have Doctor Thompson and his colleagues at the Mayo Clinic.

Frequently we hear young urologists say that the people have been educated by commercial houses to demand resections, and they are going to have them; if we do not want to do them, someone else will, so it is best to get on the band wagon, or we will have to close up our offices. That is a false statement. For years we have heard the same theory about abortions, and there are just as many people demanding illegal operations as insist upon resections, but their clamor is ignored.

AMEBIASIS—A CLINICAL SUMMARY*

By ALFRED C. REED, M. D.

San Francisco

DISCUSSION by John F. Barrow, M. D., Los Angeles; Fletcher B. Taylor, M. D., Oakland; Dudley Smith, M. D., San Francisco.

FOR our purpose here, amebiasis is limited to infestation with *Endamæba histolytica*, and this study is based on four groups of patients. These are: I, a group of 101 in Panama, reported by Anderson¹; II, a group of 92 in San Quentin Prison, reported by Johnstone, David, and Reed²; III, a group of 40 private patients seen in San Francisco and reported in January, 1932, by Reed, Anderson, David, and Leake³; and IV, another private group of 50, seen in San Francisco subsequent to the cases reported under III, just preceding. These four groups will be summarized clinically separately.

PANAMA GROUP

Group I. Anderson reports¹ an incidence of 13.9 per cent *E. histolytica* infection in Santo Tomás Hospital, Panama. Reviewing various studies of incidence, he concludes that the population of California is infected to the extent of $\pm$ 10 per cent. Of 101 amebiasis patients in Santo Tomás Hospital, 31 had diarrhea or dysentery, and 13 constipation. In forty-four there were no gastro-intestinal symptoms. Eighty-eight patients were treated with carbarsone—eighty adults, six children, and two who left the hospital with partial treatment. Thirty-seven of the treated cases were followed one month with six or more stool tests, and but one was not freed of amebas. Diarrhea and dysentery cleared in every case except one pellagrin.

SAN QUENTIN GROUP

Group II. Johnstone, David, and Reed² report a protozoal survey of one thousand inmates of San Quentin prison. Dr. L. L. Stanley, prison

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³ Read before the General Medicine Section of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

physician, has commented that this group offers an excellent cross section of California population. Nine and two-tenths per cent of this group were infected with *E. histolytica*. Of the 92 positive cases, 28 complained of indigestion, 16 had diarrhea or dysentery, 23 were subject to constipation, and 39 had no gastro-intestinal disorders. Of the ninety-two, seventy-eight had lived in or visited areas considered to harbor amebas, and thirty-six had at some time lived in the tropics. There was one case of amebic liver abscess. It is interesting to note that, by occupation, 10 were cooks, 7 bakers, 4 waiters, 6 dairymen, and 3 butchers. By nationality there were 64 Americans, 4 American-born negroes, 11 Mexicans, 4 Italians, 2 Filipinos, and 7 scattered foreign.

FIRST BAY REGION GROUP

Group III. This group of forty patients was reported by Reed, Anderson, David, Leake.³ It included 28 Americans, of whom 16 had never left the United States. There were 5 Mexicans and 3 Peruvians, while 4 were scattered. Fifteen occupations were represented, including eleven housewives. In thirty-one the chief symptoms were from the gastro-intestinal tract. Among these, 13 had diarrhea or dysentery, 7 suffered from constipation, and 4 from abdominal pain. The average duration of illness was two years. Six had undergone appendectomy with no benefit. Twenty-nine patients had associated diagnoses, including six with chronic arthritis.

SECOND BAY REGION GROUP

Group IV. This group of fifty private patients is reported here for the first time. The clinical data are as follows:

Age and Sex.—Twenty males, averaging 40 years of age, ranging from 18 to 60. Thirty females, averaging 39.1 years of age, ranging from 20 to 58.

Residence.—Of the fifty patients, fifteen, or 30 per cent, had lived only in California. The other thirty-five, in addition to their life in California, had spent varying periods in China (7), western United States (11), Midwest (6), Central and South America (4), Mexico (4), Hawaii (5), Pennsylvania, England, France and Canada (two each), and the Philippines and Palestine (one each). Four had traveled extensively around the world.

Occupation.—Of the fifty patients, 19 were engaged in some line of business, 17 were housewives, 3 were farmers, 2 each were mechanics, missionaries, nurses, or teachers, and 1 was a social worker, 1 was a student, and 1 was an enlisted navy man. The high percentage of housewives is to be noted in view of the probable chief means of transfer of amebiasis by food handlers.

Symptoms.—Of the fifty patients, forty-eight had symptoms referable in a major degree to the gastro-intestinal tract. In two the finding of amebiasis was the result of detailed study made necessary by obscurity of diagnosis. These figures plainly indicate that no patient with any type of

TABLE 1.—Indicated Major Symptoms in a Group of Fifty Bay Region Patients

Diarrhea	28	Flatulence	9
Constipation	24	Neuroses	9
Abdominal pain	21	Fever	6
Fatigue	21	Nausea or vomiting	5
Dysentery	18	Arthritis	4
Low weight	14	Anemia (secondary)	2
		Liver abscess	1

Note: The term diarrhea as here used is intended to mean an increased number of bowel movements, while dysentery means frequent stools, containing blood and mucus, and attended by pain.

gastro-intestinal symptoms has received proper medical attention unless *adequate* search for amebas has been made. The same rule should apply to all cases of obscure diagnosis of any type, and especially where fatigability, neurasthenia, neuroses, and unexplained low weight are present. In detail the major symptoms in these fifty cases were as indicated in Table 1.

Comment.—Of the six patients with fever, all were demonstrably due to secondary pyogenic infection. There is little evidence that uncomplicated amebic infection produces fever. Of the four cases of arthritis, all showed a definite and repeated association between increase or recurrence of colonic symptoms, reappearance of amebas in the stools, and arthritic symptoms. This association was too striking to be casual. It suggests that streptococci find entry to the system through the portal of amebic lesions, which thus must be classed along with other recognized foci of infection.

Comparison of the residence history above with the percentage of dysentery (36 per cent) leads one to question the prevailing view that amebic dysentery is uncommon outside the tropics and also is relatively less common in proportion to the number of cyst passers. This is discussed further below, under laboratory findings.

There was evidence of hepatitis in fifteen of the fifty cases, consisting of enlargement of the liver, tenderness, pain, or increased icteric index. It is probable that all cases of amebiasis have a hepatitis of some degree, usually subclinical.

Blood pressure findings were interesting in view of the large number (twenty-one, or 42 per cent) who complained of asthenia and easy fatigue. Of thirty-eight cases, two were slightly above normal, these being between 130 and 140 systolic (Tycos apparatus). Twenty were normal (between 114 and 130 systolic) and sixteen were below 112 systolic. Amebiasis seems to depress the blood pressure in a large percentage of cases.

Of the forty-four cases subjected to sigmoidoscopy, sixteen were normal and twenty-eight pathologic. In seven of these cases diagnosis of amebiasis was made solely by sigmoidoscopic smears. This indicates the advantage of this procedure as a routine diagnostic method.

In view of the average duration of present illness of eight years in forty-one patients and "many years" in nine patients, it is interesting to note that twenty had had previous treatment for amebiasis, usually intensive and repeated, while

in thirty cases amebiasis had not been found and often was not even suspected or considered.

LABORATORY FINDINGS:

Wassermann and *Kahn* tests were negative in all the series.

Stools.—All specimens were fixed immediately after passage or directly from sigmoidoscopic smears, in Schaudinn's solution and stained by iron-hematoxylin.⁴ Of the fifty cases, 38 had motile forms of *E. histolytica* in the stools, 15 had encysted forms, and 7 showed both cysts and active forms. Of the thirty-eight patients having active amebae, three, or 8 per cent, had neither diarrhea nor dysentery.

It is generally taught that outside of the tropical zone, amebic dysentery is relatively uncommon, and also that motile forms are associated closely with diarrhea or dysentery; and in the absence of diarrhea or dysentery, cysts are to be expected. Yet here we find in San Francisco 36 per cent of fifty cases showing dysentery, and 76 per cent of fifty cases showing motile amebae. These observations lead to certain important conclusions:

1. It is possible and probable that the ratio of amebic dysentery to amebiasis is the same in temperate climates as in hot climates. The ease with which diarrhea and dysentery develop in amebiasis in hot weather may well have no relation to different races or strains of amebae, but may be secondary entirely to physiologic intestinal and hepatic changes induced by hot weather and improper food. The resistance to treatment shown by some cases may be an indication of a difference in strain or race. This will be discussed later.

2. If 76 per cent of the cases here reported showed motile amebae, and if stool examination had been limited to cold specimens sent to the laboratory in the usual containers on the same or succeeding days, it is certain that in a majority of the series the diagnosis would have been entirely missed. Immediate fresh examination of specimens, or immediate fixation of fresh specimens, is a necessity, as motile amebae die quickly and thus the diagnosis will be missed. It is to be remembered that there is no diagnosis of amebiasis other than microscopic demonstration of amebas.

P. S. P. Test.—Phenolsulphonephthalein tests were done on twenty-three cases with an average excretion of 53.8 per cent. Of these twenty-three, five had some indication of hepatitis and averaged an excretion of 52 per cent. The other eighteen, with no clinical indications of liver damage, gave an average excretion of 54.8 per cent. The urine was negative in all cases but one, which was complicated by cystitis.

Gastric Analysis.—In fifteen patients, with alcohol meal, gastric analysis gave the following average:

	Fasting	I	II	III
Free HCl	20	16	25	26
Total acid	33	24	34	47

Four cases (26.6 per cent) showed hyperacidity and eleven (73.4 per cent) were entirely normal.

Blood Count.—The average blood count was as follows:

Hemoglobin (Sahli), 82.5 per cent (forty-seven cases).

White cells, 7,800 (forty-eight cases). Of these, seven had a count of 10,000 or more, all having secondary pyogenic infection. Excluding these seven, the average white count on forty-one cases was 7,078.

Red cells, 4,453,000 (forty-eight cases).

Polynuclear cells, 61.4 per cent.

Lymphocytes, 32.6 per cent.

Mononuclears, 3.5 per cent.

Eosinophils, 2.0 per cent.

Basophils, 0.35 per cent.

In general, the average blood count is normal with a low white count.

TREATMENT:

Of the fifty patients, forty-nine received carbarsone. Thirty-one of these had one oral course, thirteen had two oral courses. Two had three oral courses, and three had over three oral courses. A total of thirteen were given rectal courses of carbarsone,⁵ seven patients receiving one course, one patient two courses, and three patients three courses. Of forty-nine patients receiving carbarsone, eleven also were given vioform. Additional treatment was as follows: Fourteen received strict dietary oversight alone, ten were treated for complications unrelated to amebiasis, and sixteen received drug adjuvants such as tannin, calcium, and bismuth. (a) Of the twenty patients in the entire series who had received previous treatment for amebiasis, fourteen were entirely relieved of symptoms by the present treatment, and sixteen were freed of protozoa for an average follow-up period of five and one-tenth months. Of the other four cases, one could not be followed and three are discussed under the resistant cases below. (b) Of the thirty patients who had had no previous treatment for amebiasis, twenty-four were entirely relieved of symptoms and twenty-six were free of protozoa for an average follow-up period of four and eight-tenths months. Of the other four cases, one would not submit to treatment at all, one left town immediately, and two are discussed under resistant cases below.

RESISTANT CASES:

Of the fifty cases here reported, five, or 10 per cent, proved resistant to treatment in that symptoms and amebae persistently recurred after treatment.⁶ Two of these cases, C. L. 1 and R. E. 44, had gross pathology in and around the colon and rectum sufficient to explain the resistance. This pathology consisted of thickening of the bowel wall, granulomatous infiltrations and masses, and pararectal lesions consisting of granulomatous tissue, fibrous tissue, and the products of secondary bacterial infection. In this tissue the amebae are mechanically inaccessible to drugs, and the bacterial infection further tends to maintain the pathology. Here surgical intervention is indi-

cated. Ileostomy and/or removal of pararectal infiltrations offer the best hope of eventual cure. The other three cases raise the old question of a difference in race or strain. This problem is perhaps the most outstanding now in clinical amebiasis.⁶ It is to be attacked along two lines: (1) Are there differences in morphology and morphologic life cycle of these resistant strains? (2) Are there biologic or functional differences that make these strains resistant?

A short summary of these five cases follows:

REPORT OF CASES

CASE 1.—Male, 25. American. Farmer. Always lived in the San Joaquin Valley. For six years he has had severe dysentery with much blood, abdominal pain, loss of forty pounds in weight, weakness, and for two years extensive pararectal infiltration and infection, with fistulous tracts. Recurring low fever was present. His blood count showed 75 per cent hemoglobin (Sahli), 7,800 white cells; 3,910,000 red cells; polymorphonuclears, 65; lymphocytes, 28; mononuclears, 3; and eosinophils, 4. P. S. P., 65 per cent. Urine, clear. Stools constantly loaded with active *Endamæba histolytica*. Cysts were never found. Smears showed predominant Gram-negative flora. Stool culture showed *Bacillus coli* with many streptococci. Sigmoidoscope showed extensive ulceration to 26 centimeters, with abundant gray mucus and blood. An extensive pararectal clean-up was done by Dr. Dudley Smith.

Treatment consisted of repeated courses of carbarsone orally and rectally, vioform orally, tannic acid instillations, acriflavine irrigations, and bismuth orally. Previous treatment for six years had been directed to the amebic infection, but had never controlled the symptoms. It had included extensive and repeated courses of emetin, acetarsone, chiniofon, neoarsphenamin, acriflavine irrigations, and stool vaccines.

At present there has been a gain of thirty-five pounds in weight, no blood in stools, no fever, no amebas found for seven months, abundant mucus, three to four bowel movements daily, and moderate abdominal pain. The patient is not cured, but it is difficult to say if he is not in the stage of a residual chronic ulcerative colitis. If further improvement is arrested, ileostomy is indicated.

CASE 2.—Mrs. J. J. C., 43. Housewife. American. Age, 32. Has lived in Texas and California, with one trip into Mexico. For six years she has had severe attacks of dysentery with excessive blood and mucus, interspersed with constipation. She has had no fever, and no loss of weight. The sigmoid and cecum were palpable and tender. The sigmoidoscope showed heavy ulceration covered with gray mucus and blood. The stools showed numerous active *E. histolytica*, together with cysts of *E. nana*, *E. coli*, and *Iodamæba*. P. S. P. excretion was 50 per cent. There was no anemia. White cells were 13,650, with 71 polynuclears, 28 lymphocytes, and 1 mononuclear.

Previous treatment has been symptomatic and ineffective. Amebiasis was never suspected. Present treatment consisted of repeated courses of carbarsone rectally and orally, vioform orally, one course of emetin, acriflavine and tannic acid irrigations, and bismuth. A high protein, high vitamin, smooth diet and abundant calcium were given. A course of heptyl resorcinol was given for ten days at the beginning of treatment, with no benefit. Motile amebæ and sigmoidal ulceration persisted throughout. There has been improvement, shown by decreased blood, mucus and bowel movements, but not yet a cure. Active amebæ are still present after fifteen months' treatment.

CASE 3.—Mrs. R. E., 44. American. Housewife. Age, 32. Has lived only in California. For three years she has had recurring severe dysentery, with excessive

loss of blood and anemia that has twice required transfusion. Her weight has been constant. Fatigue has been extreme. Examination showed a relaxed abdomen with a tender, palpable, greatly thickened colon, which could be outlined for its entire length. Sigmoidoscopic examination showed extreme ulceration to 26 centimeters, with much gray mucus and blood. A low fever accompanied the dysenteric episodes. The stools were loaded with motile *E. histolytica*. P. S. P. excretion was 70 per cent. The blood count was as follows: hemoglobin (Sahli), 50 per cent; red cells, 3,790,000; white cells, 9,280; polynuclears, 61; lymphocytes, 32; mononuclears, 3; eosinophils, 2; and basophils, 2.

Treatment previously had included carbarsone, emetin and ipecac. Six months' treatment by us has included repeated courses of carbarsone, orally and rectally; one course of emetin, repeated vioform, bismuth, and acriflavine and tannic acid irrigations. There has been a moderate improvement, but dysentery still recurs, and the granulomatous infiltration of the colon persists. Ileostomy is undoubtedly indicated.

CASE 4.—Mrs. E. S., 37. American. Housewife. Age, 26. Has lived only in California until a trip to Mexico four months ago, during which she developed dysentery with excessive hemorrhage. She has had a low fever and much abdominal pain. The sigmoidoscope showed extensive ulceration, with excess of gray mucus and blood. The cecum and sigmoid are palpable and tender. Hemoglobin (Sahli) was 83 per cent with a normal blood count. P. S. P. excretion, 55. The stools showed active *E. histolytica*.

Treatment included repeated courses of carbarsone orally and rectally, vioform, emetin, bismuth and attention to diet, vitamin and calcium. There has been great improvement, but there are still recurring periods of bleeding, dysentery, and active amebæ.

CASE 5.—Mrs. A. V., 46. American. Secretary. Age, 38. Had lived in California, Canada, Hawaii, and during the last three years in Shanghai. Fifteen months ago, in Shanghai, she developed severe dysentery with much hemorrhage. There was no fever or loss of weight. The sigmoid and cecum were tender and palpable, and the liver was one finger below the costal margin. Gastro-intestinal x-rays were negative. The sigmoidoscope showed an intense congestion of the mucosa, with much gray mucus and blood. The blood showed 74 per cent hemoglobin (Sahli), 3,590,000 red cells; 12,160 white cells, with 59 polynuclears, 34 lymphocytes, 4 mononuclears, and 3 eosinophils. P. S. P. excretion was 57 per cent. The stools showed both cysts and active forms of *E. histolytica*, although the patient had never been subject to constipation, and diarrhea or dysentery was nearly constant.

Previous treatment had consisted of intensive and repeated courses of emetin and chiniofon. These gave clinical improvement, but not cure, and the amebæ persisted as noted above. She was given one course each of carbarsone orally and rectally, and of vioform, with the routine diet. Clinical improvement was again noticeable, but motile amebæ persisted in the stools up to the time of her leaving this district.

SUMMARY

General conclusions from the four groups of patients under consideration may be summarized as follows:

1. *Incidence.* The findings of previous reports are confirmed, in general, that amebiasis has wide, if not universal distribution in the United States. It is further indicated that the incidence in California approximates 10 per cent of the population. The infection is heavily endemic in California, and the incidence is not dependent on imported cases. The high rate among housewives

is of importance, with reference to prevention, because of the primary method of transmission by food handlers. Occupation and previous residence are not so important as defective hygiene in determining incidence, although residence in warm climates tends to increase the rate of infection, probably because in such places public and personal hygiene is less good. The problem of adequate control of food handlers must be emphasized. Age and sex are unimportant.

2. *Clinical Importance.* There seems to be adequate ground for the conclusion that a disease as widespread and serious as amebiasis should be considered more seriously from the standpoint of diagnosis by the practicing physician, and also it seems justifiable to conclude that no patient with gastro-intestinal symptoms or an obscure or incomplete diagnosis, can be considered to have proper attention without adequate study for amebiasis.

3. *Diagnosis* depends solely on identification of *E. histolytica*. For best possible results this requires initial examination of unstained smears in saline, followed by preparation of fixed smears at once from fresh stool specimens, their staining by the iron-hematoxylin method, and their examination by a competent technician.⁴ Six specimens on successive days, including specimens after Epsom salts and by sigmoidoscope, must be examined before a negative diagnosis is reasonably assured.

4. *The clinical picture* may be strongly suggestive, but is never diagnostic. Amebiasis is a systemic disease, located primarily in the colon, with frequent parasitic invasion of the liver and other organs, and with frequent general and constitutional symptoms. There is no evidence of spontaneous cure. It is always a potential danger to the host, and an actual danger in transfer to others. Symptoms may not appear from the intestinal tract. In California probably not over one-third of the cases are dysenteric, and, conversely, at least two-thirds are nondysenteric. Even with severe chronic dysentery, there may be no loss of weight and no anemia. One of the most serious complications is secondary bacterial infection of amebic lesions. Such lesions in the colon may act in a manner analogous to other foci of infection. One of the most serious sequels is chronic ulcerative colitis and/or development of extensive granulomatous masses involving the colonic wall. About 10 per cent of the cases are so resistant to treatment as to be practically incurable medically.

5. *Treatment* cannot be standardized too far without losing effectiveness. The principles which we attempt to follow in arranging a treatment course for the individual patient are in general as follows:

(a) Clinical and laboratory evidence of hepatitis is carefully noted, and the use of arsenicals is closely guarded accordingly. Associated diagnoses receive attention and the general status of the patient is improved in every possible way.

(b) Patients showing cysts, with little or no diarrhea or dysentery, are given a routine course of carbarsone orally.⁷

(c) In the presence of motile forms, carbarsone is given rectally in addition.⁵

(d) In cases where amebas persist, or as a primary treatment, vioform orally is given in 0.5 gram dosage twice daily for ten days.⁸

(e) These courses are alternated or repeated, with intercurrent free periods of ten days for full drug excretion, according to persistence or re-appearance of amebas in the stools.

(f) Resistant cases may receive, in addition, emetin hypodermically, in appropriate dosage. We are doubtful as to the actual added benefit from this procedure, although emetin is the drug of choice in frank amebic hepatitis.

(g) Tannin preparations and bismuth subcarbonate are used in persistent diarrheas and dysenteries symptomatically, combined with belladonna where pain is excessive.

(h) Dietary principles in severe resistant cases include high protein, smooth diets, with a minimum of starch. Calcium and vitamin contents are kept high by use of tribasic calcium phosphate, dicalcium phosphate, and vitamin concentrates, especially American wheat kernels and extract of brewer's yeast.

(i) Resistant cases, and those with incurable infiltrations and chronic ulcerative colitis, may require surgical treatment, consisting of appendectomy, ileostomy, pararectal and other procedures. Autogenous stool vaccines are of value in some cases where secondary infection prevents cure. Protein shock is occasionally of use. Colon irrigations with bactericidal solutions such as acriflavine, are helpful for bacterial complications. We have found a few ounces of one per cent tannic acid of symptomatic help where rectal bleeding is prominent.

350 Post Street.

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DISCUSSION

JOHN V. BARROW, M. D. (1930 Wilshire Boulevard, Los Angeles).—The incidence of amebiasis in temperate latitudes is generally underestimated by clinicians. There is no cross section report of any community on this subject. The incidence may be more than 10 per cent in one type of medical practice, and far below that estimate in the average business group. It may be encountered by any physician at any time.

No standard has yet been set as to the total symptomatology of amebiasis. Doctor Reed's work shows the enormous difference between the average report of cases and the one done by a careful clinician. His first group shows a paucity of gastro-intestinal symptoms. Group number 4 shows their almost universal occurrence. We agree with Doctor Reed that careful physical and clinical examinations will show comparatively few cases without gastro-intestinal symptoms. The percentage of arthritic symptoms is unusually small, but the causal relationship is clearly indicated. In regard to the arthritic symptoms and streptococci, the observations are timely. Recently Colonel Acton of Calcutta emphasizes the increase of streptococcus colonies in the colon of amebic infections. The ameba has the power to reduce the tissue resistance in the colon at the site of ulcers. The colonies find a peculiarly fine medium of growth in the presence of amebiasis. With resistance reduced and the bacteria increased, the invasion of the blood stream by streptococci is a natural sequel. Bacterial emboli give rise to heart, nerve and joint pathology which is unmistakable. Roos of Loma Linda has reported but not published these facts.

The clinical findings and laboratory work are admirably set forth in Doctor Reed's paper. He shows that amebiasis is what Musgrave claimed—an invasion of the system by the products and sequences of amebic infection. The white cell count is higher than the average for these cases. The author correctly explains the rise as due to pyogenic infection. The low white cell count is undoubtedly the rule.

Of the drugs used for treatment, carbarsone is undoubtedly one of the best arsenicals. The different forms of oxyquinilin, such as vioform, are good. Doctor Reed suggests the precaution, which I have always advised and exercised, about emetin. It should never be used as an amebicide alone, but should be given to protect the liver. It has a tonic action on the intestinal mucosa and, possibly, on other glandular structures. If given in a tonic way, it is always helpful and may be continued over a comparatively long period of time with benefit from first to last. The one-grain dose should seldom, if ever, be used.



FLETCHER B. TAYLOR, M. D. (400 Twenty-ninth Street, Oakland).—This compilation makes Doctor Reed's experience available to all of us, and broadens our approach to the study of amebiasis in our own patients. Several practical points will bear reemphasis.

1. We must especially scrutinize the casual patient with indefinite symptoms. As in other protozoal diseases, diffuse systemic complaints often predominate, and local symptoms may be completely in abeyance.

2. Doctor Reed mentions two of five resistant cases which did not respond to treatment because of "thickening of the bowel wall" and "granulomatous infiltrations and masses." The other three were resistant presumably because of difference in the form or behavior of the ameba. But they also showed gross mucous membrane lesions when proctoscoped: "heavy ulceration," "extensive ulceration" and "intense congestion of the mucosa with much gray mucus and blood," respectively. Given a case of amebiasis, we may then expect our greatest trouble in curing those with visible changes in the rectal mucosa.

3. There is a rather discouraging note in the report that six out of forty patients had had removal of the appendix without benefit, and later the ameba was found. Each of these six took a one per cent chance on surgical death, and spent \$500 on money or medical time on false grounds. This recommends investiga-

tion for ameba in all cases of "chronic appendicitis." If there are positive findings, remove the ameba before removing the appendix.

4. For those of us who are away from medical schools, the problem of diagnosis is a real one. Most of Doctor Reed's cases are diagnosed on motile forms. These motile forms are obtained by direct rectal smear or by examination of stool specimens immediately after passing. For proper diagnosis the patient must report in person to someone who can recognize the motile ameba. If this is not possible, smears may be prepared, "fixed" and forwarded according to a plan previously outlined by Doctor Reed.

5. Food handlers are important carriers of infection. Since Doctor Reed compiled these statistics there has been an important "epidemic" of acute amebiasis emanating from a kitchen employee in a large Chicago hotel.



DUDLEY SMITH, M. D. (450 Sutter Street, San Francisco).—It will no doubt be startling to many physicians to have it brought to their attention that about ten per cent of the population of California is infected with *Endameba histolytica*. This disease can no longer be classified as tropical, for it occurs in every one of the United States and, as Doctor Reed has pointed out, a large proportion of its victims have never been outside the States, and many never outside their own state. In view of its frequent incidence, its wide distribution and the serious disability caused by this disease, I am glad that Doctor Reed has stressed the importance of "adequate" study for amebiasis of all patients with gastro-intestinal symptoms and those with obscure or incomplete diagnoses. And I am glad that he has again pointed out what he means by adequate study, for I do not doubt that the experience of many physicians parallels my own, in that I have many times had repeated negative reports for amebiasis in a patient who has been proven to have the disease when "adequate study" has been instituted. Examination of cold stools sent to the university at Berkeley costs little or nothing, and is worth less.

When surgical sidetracking of the fecal stream becomes necessary in resistant cases, I believe the cecostomy originated by Dr. Charles Phillips of Los Angeles, and described in CALIFORNIA AND WESTERN MEDICINE for June, 1925, has many and important advantages over appendicostomy and ileostomy.

NON-MALIGNANT LESIONS OF THE COLON —THEIR ROENTGENOLOGICAL DIAGNOSIS*

By R. G. TAYLOR, M. D.
Los Angeles

DISCUSSION by Carl B. Bowen, M. D., Oakland; Henry Snure, M. D., Los Angeles; L. Henry Garland, M. D., San Francisco.

A ROENTGEN examination of the colon is made by observing the opaque meal after it has reached the colon. These observations are best made six hours after the administration of the meal, and at such subsequent times as the progress and circumstances seem to require. Also, very valuable information can be obtained by the administration of an opaque enema.

THE OPAQUE MEAL

With the meal at six hours it has generally progressed so that the cecum is outlined. At nine hours the small bowel is nearly empty, and the head of the meal has generally progressed into

* From the Hospital of the Good Samaritan, Los Angeles.

* Read before the joint meeting of the Radiology and General Surgery Sections of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

the descending portion of the colon, or to the splenic flexure at least. At twenty-four hours the whole colon is generally fairly well outlined. Questions of local delays and general progress of the meal are obtained by observations on subsequent days, if thought desirable. In cases of disturbed motility, there may be extremely rapid emptying of certain portions of the bowel, or the whole bowel may be practically empty twenty-four hours after the administration of the meal; or there may be marked sluggishness and stasis in its movement. This can be either local or general, and can be due either to functional or organic changes. Observations should be made on the fluoroscope, and the bowel observed under the palpating hand or instrument. Films should be made, in our opinion, preferably in the supine position. This gives the same view and relation of the structures as seen in the fluoroscope. It requires making films with the fluoroscopic tube; this has offered some technical difficulties in the past that are not as serious at the present time, when the double focus tube can be used, taking the fine focus for fluoroscopic work and the broad focus for radiographic work. The extra trouble and time, in our opinion, is compensated for by the fact that we have a permanent record which closely simulates the fluoroscopic observation.

We also place a high value on the films made in the erect position, as well as supine. This demonstrates fixation or mobility at times even better than can be shown by palpation.

In giving the enemas it is not necessary to use much pressure, and it is better not to give them rapidly lest spasm and cramps, with difficulty in retention, result.

We wish to lay particular stress on an observation made after the patient has evacuated the bulk of the injected material. We also wish to stress both with the meal and with enemas, observations made on the fluoroscope, and with films when desirable, in oblique positions. Many sharp kinks or angulations resolve themselves into harmless curves when seen in proper cross sections. Overlapping loops of bowel which cannot be pushed aside or separated sufficiently for complete visualization, can frequently be untangled and shown in their practical entirety. This is especially true in the sigmoid region.

The point should be stressed that an opinion as to the complete absence of pathologic changes in the lower sigmoid and rectum is seldom justified. These regions are hard to visualize except when distended, in which case many lesions will be entirely masked and not visible. Fortunately, these regions can be better reached and examined with rectal and proctoscopic instruments. We would like to express the opinion that this type of examination is not done frequently enough. Patients with gastro-intestinal symptoms are given a meal and an enema, without the rectum and lower sigmoid receiving the proper attention.

BOWEL ANOMALIES

Anomalies are not distinctly pathologic in that many of them are not symptom-producing. They

are of many kinds and degrees, and result chiefly from failure of fixation, or rotation from the embryonic stage and position of the bowel. The most common anomalies are the failure of complete rotation on the right side, with lack of fixation in the hepatic flexure region, the cecum being frequently found up under the liver, the appendix on the right side, and with all degrees of mobility. Another fairly common condition is to find practically all the bowel on the left.

The other common anomalies consist chiefly of redundancies with extra loops. Many of these are probably symptom-producing in that there is an unusually long sojourn of the bowel material, and disturbances of motility. In any event, they are generally quite evident, and offer no particular difficulty in diagnosis.

ADHESIONS

A diagnosis of adhesions rests largely with the fluoroscopic observations, in which, with the meal or enema, narrowed and fixed areas can be made out. The question of fixation, of course, can only be definitely determined by manual palpation on the fluoroscope, or occasionally by taking supine, or prone, and erect films. Ordinarily not much difficulty is had in differentiating adhesions from spasm on account of the evanescent character of the latter; or from new growths where the actual organic change in the bowel wall is likely to be more marked.

Adhesions may fix the colon either in a normal or abnormal position. Stenotic segments may show; these generally have a dilatation proximal, with stasis. There may be abnormal adhesions of single loops to each other, or to other structures in the abdomen; a high, otherwise movable sigmoid may be adherent to the appendiceal area, etc.

The differentiation between adhesions and adventitious bands is not always easy or possible. Usually the adhesions have some fixation; the bands are generally found in a colon that is hypermobile.

ADVENTITIOUS BANDS

Adventitious bands with reference to the large bowel are most commonly found, in spite of much testimony in the literature to the contrary, involving the ascending colon and cecal region. These are not easily demonstrable by enema; in fact, an enema with observations only of the distended bowel will absolutely mask any of the usual findings that would suggest an adventitious band. It happens occasionally in a very advanced stage that fixation similar to adhesions is produced, but commonly they are attached to a mobile right colon that has failed from a developmental standpoint in fixation of the hepatic flexure. The lesion as seen roentgenologically is caused by a twist or torsion of the bowel at the point of attachment of the band to the colon. It is not usually observed with the patient supine or prone, with the cecum up on the ilium, but only when the cecum is deep in the pelvis, either from its being taken there by its loaded weight or when in the erect position.

DIVERTICULA

Diverticula are found in the colon and vary greatly in their location and number. They are most commonly found in the descending and sigmoid portions, but may be found in the transverse portion, or cecum and ascending colon. They may vary greatly in size as well as in number.

Diverticulosis is probably most reliably and best shown by the use of the enema. The twenty-four and forty-eight hour observations of the meal after the colon is partly empty frequently give us information, but usually a better visualization will be had with the enema. It should be remembered, however, that a colon well distended with an enema frequently hides many of the small diverticula, and that observation or films should always be made following the patient's evacuation of the enema.

Diverticulosis needs chiefly to be differentiated from new growth. This is sometimes difficult. If diverticulitis is present, there may be enough swelling and edema to block the diverticula, and no definite lesions will receive the opaque solution and so be demonstrated. Again, diverticula may be found in connection with new growth, and it may be difficult definitely to differentiate deformity of the bowel due to new growth and the possible deformity due to inflammatory reaction in connection with diverticulitis.

OTHER PATHOLOGIC CONDITIONS

Tuberculosis.—Tuberculosis most frequently occurs in the cecal region. This lesion as observed in connection with the meal shows evidence of spasm, poor and incomplete filling of the cecum, but most characteristic of all, an intolerance of the diseased portion of the bowel to the presence of the bowel contents. This, however, is also characteristic of most any type of ulceration in the colon. The deformity may be connected with considerable fixation, if it is a lesion of long standing, due to pericecal and cecal wall inflammation. It probably cannot be differentiated from so-called non-specific ulceration in the terminal ileum and cecum. In ulceration connected with ordinary types of colitis, the lesions are generally evidenced in the descending and pelvic colons, and the use of the proctoscope almost always demonstrates lesions which can be thus examined, and specimens obtained for culture purposes.

Ileitis.—Cases of so-called regional ileitis which have been recently described are probably difficult to differentiate by the x-ray examination alone. As a rule, the cecum is not as markedly involved as usually found in tuberculosis. However, after fistula are formed, there may be enough change in the cecal wall to suggest either new growth or tuberculosis. Tuberculous lesions in the cecum that have existed for some time, sometimes cause enough scar tissue formation and stiffening of the cecal wall to mask the evidence of spasm with consequent decrease in motility, which are two of the important signs connected with ulcerative colon lesions.

Intussusception.—Intussusception is not as common in the colon as it is in the small bowel. However, it does occur. All the cases we have observed in the colon have been in bowels that were extremely redundant, with long, mobile loops. A not very uncommon finding is a prolapse of the small bowel into the cecum, frequently the result of tumors in the small bowel. These are sometimes hard to recognize unless one pays considerable attention to the history and clinical findings, and then they frequently can be picked up. They may be intermittent, and reduce themselves, and reform. We have had one case in which the tumor was produced in a paroxysm of spasm in the patient, while the abdomen was being palpated; very shortly afterward the pain suddenly stopped and the tumor disappeared. This happened while the patient was being observed on the fluoroscope, but unfortunately the bowel was not filled with barium at the time, so a good radiograph was not obtained. Intussusception of the small bowel into the cecum can simulate new growth and possibly suggest tuberculosis.

Colitis.—Colitis in its commoner forms, so far as the roentgen ray is concerned, is functional without actual demonstrable lesions except evidence of spasm. However, in advanced forms and in ulcerative varieties where actual organic changes are present in the bowel wall, the appearances are usually quite characteristic. In the presence of ulceration, the usual hypermotility, local tenderness, spasm, and intolerance of bowel contents, are seen, similar to that found in tuberculosis. In more advanced lesions the bowel assumes a tubular form and is frequently shortened. The loops disappear and the bowel becomes rigid, contracted and immovable. These lesions occur usually in the distal colon, descending and pelvic colons. Spasm is sufficient, sometimes, to simulate them. Usually a careful and extended examination will differentiate the non-organic deformity due to spasm.

Non-malignant Polyposis.—Non-malignant polyposis is occasionally seen. It has been quite rare in my experience, however, and I have no good film to show you. It is frequently difficult to demonstrate, although the use of barium in small quantities followed by expansion of the colon with air has resulted in some striking pictures, especially as recently reported by Weber.

1212 Shatto Street.

DISCUSSION

CARL B. BOWEN, M.D. (1624 Franklin Street, Oakland).—In addition to points mentioned by Doctor Taylor in the differential diagnosis of carcinoma and inflammatory lesions of the colon, it is well to keep in mind that defects due to inflammatory lesions are usually longer and more symmetrical.

I should like to ask Doctor Taylor how frequently he has found mobile ceca associated with pain and tenderness in the right lower quadrant, particularly after a six-hour meal; and if he has found such to be the case, how he explains this pain and tenderness? Also, if he finds x-ray evidence of pressure on the duodenum as a result of drag from a heavily loaded mobile cecum and, if so, how frequently?

HENRY SNURE, M. D. (1501 South Figueroa Street, Los Angeles).—I find my opinions on the diagnosis of non-malignant colon lesions to be in accord with those of Doctor Taylor. Although he did not mention it, I assume that he makes a plain film of the abdomen before the administration of barium, to rule out partial obstructions and megacolon that may be visualized by the gas shadows; also to rule out urinary or biliary calculi, malignant metastasis to spine, etc., which might give clinical signs suggestive of colon pathology, and be obscured by the barium shadows. In addition to the routine films suggested for the opaque enema study, I include an additional prone film which visualizes the transverse colon and pelvic colon better, I think, than do the other views. In a few cases I have found that diverticula do not fill until the seventy-two-hour film is made; however, the opaque enema usually suggests their presence by many fine so-called saw-tooth spastic changes, particularly in the pelvic colon. Films made of the colon an hour or so apart frequently show marked variations of outline; in some cases the redundant loops almost disappear, suggesting longitudinal contraction of the colon.

Kantor has shown that the average vertical mobility of the hepatic flexure is $1\frac{1}{3}$ inches, that of the cecum $1\frac{1}{3}$ inches. Mobility of less than one inch of the cecum is considered as fixation, and more than $2\frac{1}{2}$ inches is considered hypermobility. Pain in the lower right quadrant, tenderness and a predisposition to colonic stasis are usually associated with hypermobility of the hepatic flexure. Hypermobility of the cecum is often noted in the irritable type of colon.

It cannot be too strongly emphasized that lesions in the rectum are difficult to visualize by barium mixture alone, or combined with air. The patient should always be examined by the proctoscope regardless of the roentgen-ray findings.

I should like, also, to ask Doctor Taylor whether he attaches any significance to the insufficiency of the ileocecal valve, when no gross changes of the outline can be demonstrated.

✂

L. HENRY GARLAND, M. D. (450 Sutter Street, San Francisco).—Doctor Taylor presents a concise summary of the differential points in the roentgen diagnosis of non-malignant colon lesions. His opening remarks on technique are valuable and important. We unquestionably miss many organic lesions of the large bowel by too rapid and too routine a type of examination. The suggestion that the double-focus type of x-ray tube might be used in the fluoroscope is, I think, extremely interesting. However, to secure really satisfactory films on the fluoroscopic table would necessitate some modification of most American-made fluoroscopes, *e. g.*, a much more rugged type of screen and cassette holder, a more readily adjustable target-screen distance device, better protection for the operator, etc. As Doctor Taylor implies, fluoroscopic examination must always be considered incomplete; adequate radiographic examination is needed as well.

In connection with lesions of the rectum and rectosigmoid, I wonder if the time has not come when radiologists should themselves do a routine digital examination. Pathological museums are full of specimens of lesion gross enough to have been felt readily with the index finger, yet missed by ordinary barium examination and overlooked by a hurried clinician.

Adhesions, especially about the cecum and ascending colon, are extremely difficult to diagnose. Sometimes a cecum, freely mobile under the screen, will be found, at operation, plastered down with adhesion; one had apparently merely moved the bowel plus adhesions up and down on the retroperitoneal layer of fat. Conversely, an immobile cecum does not always show adhesions at operation.

Tuberculosis of the ileocecal region presents no local pathognomonic finding, but evidence of ulceration in that region always suggests the advisability of making a chest roentgenogram; signs of tuberculosis in the latter usually identify the nature of the bowel lesion.

One is impressed with the statement by a clinician of Doctor Taylor's experience, that the common type of colitis presents no demonstrable roentgen changes. This diagnosis seems to be a purely clinical one, having no clear-cut ante- or postmortem pathological findings.

Lastly, non-malignant polyposis is mentioned. This is a rare disorder. Indeed, papillomatosis might be a better name; reserving the term "polyposis" for the diffuse, truly polypoid lesion of the colon which, as far as we know at present, always terminates in carcinoma.

✂

DOCTOR TAYLOR (Closing).—Answering Doctor Bowen's questions: The mobile cecum is frequently associated with pain and tenderness in the right lower quadrant, especially if there is also present a congenital band, which is put on tension when erect, or when the cecum is loaded; or, if there is an adjacent appendix which shows fixation at some point, allowing the cecum to be quite movable, but when erect its normal downward movement results in tension at the point of fixation of the appendix. Certain other types of adhesions also may be connected with symptoms, even though the cecum is quite mobile.

The mobile cecum is ordinarily a part of a general lack of fixation of the abdominal structures, and I cannot say that I have ever noticed any particular relation between this condition and pressure on the duodenum; the duodenum itself, in most patients with a hypermobile cecum, is also quite movable.

As Doctor Snure suggests, a plain scout film of the abdomen is always made prior to the administration of barium for the reasons which he so well states. I have never been able to connect an insufficiency of the ileocecal valve with definite symptoms or pathology. It is a very common finding. We pay no attention to it.

INSULIN FATTENING IN THE AMBULATORY PATIENT*

By H. CLARE SHEPARDSON, M. D.
San Francisco

DISCUSSION by *Bernard Smith, M. D., Los Angeles; Garnett Cheney, M. D., San Francisco; F. M. Pottenger, Jr., M. D., Monrovia.*

IT is generally conceded that obesity is not only an undesirable condition, but actually a menace to health. Thinness, on the other hand, is thought of as an asset, and is usually sought for by the members of both sexes. In general, this attitude is correct, provided the undernourishment is not excessive. Yet malnutrition may be a serious impairment to longevity even in early adult life.

MALNUTRITION AND LONGEVITY

It has been shown, for example, that among men who are over five feet ten inches tall a weight of 20 per cent below the normal increased mortality 30 per cent. If the person is 30 per cent underweight, the figure is 50 per cent. It is probable that the most desirable state of nutrition approximates the so-called normal weight for height, age, and sex, with perhaps a variation of not more than 10 per cent either above or below the standard.

Just as there are many active individuals who eat lightly but nevertheless accumulate fatty tissue,

* Read before the General Medicine Section of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

so are there relatively inactive persons who eat heartily and yet remain thin. Although the cause of such a chronic state of undernutrition has not as yet been satisfactorily explained, certain associated stigmata are frequently present. These persons are usually lacking in stamina and physical vigor, and become easily fatigued. Often they have narrow, shallow chests, with which is commonly associated a visceroptosis, and poor cardiovascular development. Gastro-intestinal neurosis with its many symptoms, as well as more or less asthenia, may be present. Frequently the problem is one of physical constitutional deficiency rather than actual disease. Most often these patients have consulted many physicians in their efforts to obtain relief from the various complaints, such as indigestion, poor appetite, nervousness, or easy fatigability. Many have been chronically underweight for years and have sought to gain, more or less unsuccessfully, by such measures as forced eating, prolonged vacation, and rest cures.

Prior to the last decade it was almost an insurmountable task to improve the feeling of well-being of this group of individuals. To be sure, rest cures helped, but only temporarily, and other measures were even less efficient, so that physicians eventually came to a feeling of hopelessness in the therapeutic agents available.

USE OF INSULIN IN UNDERNOURISHED INDIVIDUALS

It was, therefore, almost a foregone conclusion that such a potent hormone as insulin has proved to be would eventually be utilized in an effort to improve the physical condition of the chronically undernourished person. And, as a matter of fact, in spite of the favorable results from its use which have been recorded in such widely divergent conditions as cardiac decompensation,¹ scleroderma,² cancer,³ toxemia of pregnancy,⁴ morphinism,⁵ tuberculosis,⁶ peptic ulcer,⁷ rickets,⁸ pellagra,⁹ chronic ulcers and circulatory disturbances of the extremities,¹⁰ insulin appears to have its greatest practical usefulness, aside from the control of diabetes mellitus, in the treatment of nondiabetic malnutrition.

The American pediatrician, Pitfield,¹¹ pioneered the use of insulin in the treatment of inanition. The dosage used by him was extremely low—one unit daily—although apparently definite results were obtained. It remained for Falta¹² to place the insulin treatment of nondiabetic undernourishment on a practical basis. He started his patients on ten units three to five times daily, and increased the dosage to as much as thirty units five times daily with very satisfactory results. Subsequent to the publication of Falta's results, many confirmatory reports of the efficacy of insulin in malnutrition have appeared. No attempt will be made to review the voluminous literature which has accumulated on this subject, for both European and American internists have made use of this substance not only in uncomplicated inanition, but also with those individuals who are underweight as a result of such diseases as tuberculosis, cancer, and hyperthyroidism. Suffice it to say that in reading the literature one is impressed with the

almost universal improvement obtained by this type of therapy. Few authors mention many failures.

HOW INSULIN ACTS IN MALNUTRITION

Originally the use of insulin in malnutrition was undertaken purely as an empirical measure, although its depressing effect on the blood sugar was known. Recent investigations by Okada¹³ have demonstrated that insulin favors the flow of gastric and pancreatic secretion and of bile. But it remained for Quigley, Johnson, and Solomon¹⁴ to explain the marked increase in appetite usually resulting from insulin administration in adequate doses. They showed that subcutaneous injections of insulin in amounts of twelve to twenty units usually produce in normal human subjects, fasting eleven to forty-four hours, an increase in gastric motility. The essential features of this response are an increase in gastric tone and a very prolonged hunger period. Furthermore, the degree of hunger parallels rather closely the degree of gastric motility.

Although these investigations have elevated such use of insulin from an empiricism to one of rational therapy, the exact operative mechanism in cases of malnutrition with intact carbohydrate metabolism is still a matter of speculation. Whether the total glycogen is increased or decreased by the administration of insulin to normals (the literature contains rather contradictory evidence on the point, although MacLeod¹⁵ states that there is an "undoubted decrease in the total glycogen which occurs on injecting insulin into normal animals"), the respiratory quotient is elevated, indicating an increased carbohydrate oxidation. Falta believes that insulin affects not only carbohydrate metabolism, but also general metabolism; and that it accelerates intestinal digestion and absorption. Certainly it is true that an individual can be induced to eat and assimilate a large amount of food, much of which will later be deposited as fat. In order to obtain adequate results it is essential to take the fullest advantage of the hunger engendered by insulin and capitalize on the intense food craving. The quantity of food that an individual can consume and apparently digest is in some instances astounding. Furthermore, the psychic aversion to food frequently encountered in the psychasthenic can usually be overcome, thus bringing about the establishment of better habits of eating as well as an increased ingestion of food. And it is probable that the gain in weight results from this increased intake together with better digestion and an increased assimilation of food, rather than from an altered water metabolism, as has been suggested.

Diabetic edema is not uncommon, but Blotner¹⁶ demonstrated that the relation between fluid intake and output in nondiabetic individuals taking insulin remained unchanged during and after treatment. Furthermore, the occurrence of edema in the nondiabetic has not been reported, and the mere fact that the weight is usually maintained after the omission of insulin contradicts the possibility of a marked water retention. However, for

TABLE 1.—Insulin Fattening

Case No.	Sex	Age	Ideal Weight	Weight prior to Insulin	Pounds under Weight	Gain in Weight per Week										Total Gain Pounds	Maximum Insulin Dosage	Blood Pressure	Basal Metabolic Rate	Remarks
						1	2	3	4	5	6	7	8	9	10	11				
1	F	48	152	108½	43¼	109¾	111¼	111½	112¾	113¾	114½	...	...	Still under treatment	145½	...	45	130/60	1. %+	Reached present dosage February 10, 1933.
2	M	37	164	132¾	31¼	135½	136½	138½	140½	141¼	142¾	144¼	...	...	145½	...	55	106/68	.4%—	
3	F	39	132	107¾	24¼	110½	111¾	110¼	108¾	110¼	113	113¾	Local	reactions	...	...	40	130/80	9. %+	Influenza February, 1932, during fourth week.
4	F	34	145	93	52	95¼	94¼	95	...	100¼	102	...	...	104½	...	...	60	125/80	0.	Therapy not consistent; many doses omitted.
5	F	31	127	106	21	107¾	...	110¾	...	...	...	...	...	...	112¾	...	25	90/60	12. %—	Severe reactions with larger doses.
6	F	30	130	102¾	27¼	105¼	106¼	106¾	105½	109½	...	...	110½	...	...	111¼	55	100/50	4.6%—	Therapy not consistent.
7	F	35	135	107¾	27¼	...	110	113¾	...	114¾	...	117¾	...	Still under treatment	...	...	20	120/78	6.3%—	
8	F	33	127	92½	24½	94½	98	...	...	...	...	...	...	...	...	...	30	110/70	2.3%+	
9	M	17	118	88	30	...	...	...	...	93¼	...	...	...	96	...	98½	64	94/50	13.9%+	Still under treatment.
10	M	43	200	166½	33¾	...	...	...	168½	...	...	...	171¼	...	...	...	40	110/68	8.8%+	
11	F	34	138	105½	32¾	...	...	...	110½	...	...	112¾	Local	reactions	...	...	40	110/60	17. %+	
12	F	22	141	102½	38½	104¼ Mon this—	106¼	107½ (1) 114¾	...	110¾ (3) 115½	...	112 (5) 118½	...	113 (7) 119½	114	...	...	104/60	.1%+	Probably longest continuous injections of insulin on record. February 4, 1932, to date.
13	F	27	133	115¼	17¾	...	...	...	119¼	...	...	...	...	...	...	...	40	100/70	5.3%—	
14	F	32	122	93¾	28¾	...	...	...	94¼	...	101½	Complicated by tbc.	...	...	...	...	60	110/76	11.7%+	
15	M	12	76	66¼	9¾	67	...	69¼	71½	...	...	...	...	...	...	...	45	90/68	16.7%+	
16	F	34	137	102¼	34¾	107¾	106¾	...	113	...	...	...	118¼	...	...	...	60	104/60	1.9%—	
17	M	44	162	126¾	35½	128¾	131½	...	...	General reactions.	...	...	...	...	...	...	35	100/60	Not done	

a concise review of the various theories regarding the mechanism involved in the increasing of weight by insulin administration the monograph by Frank and Wagner¹⁷ should be consulted.

INSULIN TREATMENT AND HOSPITALIZATION

While a majority of the patients on whom this type of treatment has been utilized, especially by the earlier workers, were under rigid institutional supervision, hospitalization is quite unnecessary. Nichol¹⁸ has recently reported the late results in sixty-three patients, fifty of whom were ambulatory. No ill effects have been apparent, and it is unlikely that there is any real risk involved except possibly where actual heart disease exists. Electrocardiographic studies by Middleton and Oatway¹⁹ demonstrated a decrease in height of the T-wave in all three leads with less marked changes in other components, with insulin reactions; so that in the presence of myocardial injury insulin shock might result in definite damage. Consequently, it would be ill advised to attempt the administration of insulin to patients with obvious cardiac disease, or to elderly patients in whom depression of the blood sugar would in all probability result in impaired nourishment to the myocardial musculature.

AMBULATORY PATIENTS SELECTED FOR THIS STUDY

The results of this series of seventeen unselected cases, all of whom were ambulatory and whose ages varied from twelve to forty-eight years, are given primarily to show that, if proper coöperation be obtained from the patient, increase in weight usually results. Secondly, however, there are included in this series several individuals in whom are typified the chief reasons for failure. Finally, the report of one patient is included who has received three injections of insulin daily for fourteen months. Nowhere in the literature have I found reference to a case in which a nondiabetic patient has received insulin for this length of time.

The immediate effects of treatment can be summarized as follows:

1. Definite sharpening of the appetite;
2. Increase in the feeling of well-being;
3. Increase in weight;
4. Improved strength;
5. Improved tissue turgor;
6. Better gastro-intestinal function.

Any ill effects which may ensue are manifested quite early. They are usually confined to marked local reactions or severe general reactions.

The incidence of local skin hypersensitiveness is high as compared with its relative rarity in patients with diabetes mellitus. Blotner reported its occurrence in six of nineteen patients, although Nichol had only three cases in his much larger series. These local reactions, which occur as urticarial weals about the site of injection, may be extremely aggravating and quite painful. They frequently persist for several hours, and sometimes are of sufficient intensity to warrant discontinuing treatment. Tuft²⁰ feels that a reaction such as this to insulin is not necessarily a specific hypersensitiveness to insulin protein, but rather is dependent on some irritant quality of the particular preparation used. That this effect can sometimes be avoided by changing either the brand of insulin or the type of insulin used (the insulin usually obtained is prepared from hog pancreas, but beef insulin is available), is demonstrated by Case No. 1 in this series where from one preparation of insulin the patient developed extremely painful reactions which ceased as soon as another preparation was substituted. Usually, however, as Blotner points out, persons who become sensitive remain so to all brands, suggesting an actual sensitivity to insulin protein.

For some reason not entirely explained, general reactions may be quite severe in spite of the fact that the patient takes ample food, and that the blood sugar does not sink to a level usually considered necessary for hypoglycemic reactions. These occurred in our Case No. 12—although they were finally overcome—and in Case No. 16. In the latter instance they were so severe that it was necessary to abandon treatment. The patient in Case No. 5 developed severe reactions while taking fifty units of insulin daily. These persisted for several days after insulin had been omitted, and in spite of a blood sugar of 129 milligrams per cent. Insulin was subsequently resumed in smaller doses without uncomfortable effects.

All of the patients included in this report have been tall, slender, more or less asthenic individuals. Most of them have made numerous attempts to gain weight without permanent results. Under insulin therapy none of them failed to gain, and in those cases in which recent reports have been obtained the added weight has been for the most part maintained. At first glance it would seem that the increase in weight is not sufficiently marked to compensate for the discomfiture and trouble involved. It should be emphasized that these patients are all quite thin; consequently the addition of even a few pounds is exceedingly wel-

come. The maximum gain observed occurred with patient No. 12, whose weight increased from 102½ to 119½ pounds on forty-five units of insulin daily, although several of the patients, as is indicated on the chart, are still under treatment. One patient voluntarily discontinued treatment after two weeks, during which she gained three and one-half pounds. Subsequent reports on her condition have not been received.

PROCEDURE WHICH WAS FOLLOWED

The procedure utilized in this work has been as follows:

A glucose tolerance curve was done on the patient to be certain that, following the stimulation of the pancreas by carbohydrates, the blood sugar did not normally reach an unusually low level. If the curve was satisfactory, insulin was begun by giving five units before the heaviest meal of the day. If no reactions ensued and no intolerance became apparent, the dosage was increased every other day by five units given before one of the other meals. Unless it was not practical for the patient to take insulin before all three meals (and it was inconvenient for some, especially office workers, to take insulin before lunch), an attempt was made to give twenty units approximately half an hour before the three main meals. Each patient was cautioned regarding insulin reactions, and definitely advised to carry sugar *at all times*. An occasional patient found it impossible to take twenty units before breakfast because of the occurrence of marked reactions about 11:30 a. m. The dosage in these instances was reduced to a point where no reactions were felt. Treatment was discontinued if intolerance became manifest or when weight gain ceased.

COMMENT

In this series the dosage varied from twenty to sixty-four units daily, and it is quite probable that additional insulin could be given if necessary. Analysis of the occasional inadequate results reported indicates the failure to be due, in most instances, principally to the administration of an insufficient amount of insulin. The quantity given must be increased to the point where the physiologic effects are manifest. But because of the variation in tolerance, adequate doses should be approached cautiously. For example, one patient (Case No. 7) obtains a tremendous stimulation of appetite on ten units twice daily, but will develop rather severe general reactions if a greater amount is administered. On the other hand, a boy, aged seventeen (Case No. 9), takes thirty-two units *one hour* before breakfast and an equal dose one hour before dinner, and yet must exercise rather strenuously before eating to obtain any appreciable increase in appetite. Without the exercise three or four hours might elapse before obvious increase in hunger occurs. He has never experienced any symptoms suggestive of hypoglycemia.

Excluding the occurrence of reactions, either local or general, of sufficient intensity to necessitate discontinuing the use of insulin, the only apparent cause of failure results from the in-

convenience experienced by the patient. Most of the individuals are of the asthenic type and are easily discouraged. It must be admitted that there is some doubt as to whether the discomfort, as well as the cost of treatment, are always actually worth while. Certainly a fair proportion of this group cannot or will not tolerate two or three injections daily, and unless marked hunger is produced prior to at least two meals daily, very little increase in weight will be obtained. Even though definite results may be apparent very early, within a week, this indisposition on the part of the patient may persist. On the other hand, provided adequate amounts of insulin are administered, an increase in weight can be produced almost uniformly. Apparently no complicating disease (excluding cardiac pathology) contraindicates its usage. The literature is replete with references to the use of insulin in increasing the weight of individuals suffering from tuberculosis, cancer, hyperthyroidism and other debilitating diseases.

It should not be implied that the increase in weight is unlimited. The largest increment of increase occurs in the first two or three weeks of treatment after the maximum dosage has been established. Subsequent gain is slow, as is evidenced by Case No. 12 in the present series. This girl gained eight pounds in the first two months of treatment. During the ensuing year an increase of only nine pounds has been apparent. She is still about twenty pounds under her ideal weight. There are, however, apparently two types of weight increase as reported by various writers. In one group the gain is rapid and fairly continuous throughout the period of insulin therapy and, in a few instances, continued after the omission of insulin. In the other group, gain in weight is rapid at the beginning of insulin therapy, becomes less marked as time goes on and finally the weight becomes stationary, whether or not insulin is taken. No instance has been reported in which the weight of a person taking insulin has increased beyond the normal, and usually the gain ceases while the patient is still definitely below the ideal. Even so, the general improvement noticed by the patient commonly compensates for the inconvenience, for ordinarily the increase in weight is accompanied by a marked improvement in the feeling of well-being. The skin acquires a healthier color and turgor, the nervous system becomes more stable, and there is an increased strength and vigor. Insulin serves as an admirable tonic, both physiologically and psychologically, and is of definite value in the management of cases in which it is desirable to bring about a gain in weight. It is rational, simple and safe.

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DISCUSSION

BERTNARD SMITH, M. D. (710 Wilshire Boulevard, Los Angeles).—The use of insulin in the treatment of cases of chronic malnutrition is frequently of definite help, and reported results are sufficiently encouraging to justify warnings that the method may not be without danger. Induced hypoglycemia, or even too rapid a fall in the condition of hyperglycemia, may be the cause of serious cardiovascular damage to the adult diabetic. There is no proof that the adult non-diabetic cannot be harmed in the same way.

Patients must be selected for insulin therapy with the greatest care. Doctor Shepardson has used the glucose tolerance test as a routine measure before permitting insulin to be used. He has had the dangers of the method in mind in interpreting the tolerance curves in regard to a low blood sugar response. When there appears the possible picture of rapid disappearance of glucose from the blood stream, additional information may often be obtained by watching the blood sugar response to a heavy mixed meal.

The adult, even in the third decade of age, with poor general nutrition, carries the circulatory picture of the associated asthenia. Here it is of great importance that all information possible be obtained in the early period of treatment regarding the individual reaction to insulin as it affects a circulatory mechanism that is chronically subnormal. If feedings cannot be given at such frequent periods as to maintain the blood sugar at a constant level of the individual physiologic requirement, there is danger of cardiac or circulatory damage, even when blood sugar readings may show values within the range of the textbook normal. This has been guarded against by Doctor Shepardson by beginning with an insulin dosage of small unit value. Unless the physician is thoroughly familiar with the circulatory changes that may be the result of an induced lowering of blood sugar, too great caution cannot be used in the selection of cases for this form of treatment. When ambulatory treatment is necessary, the responsibility of the physician is greatly increased and must be realized.

Doctor Shepardson is to be congratulated on the intelligent coöperation he has had from this group of patients. It is largely due to painstaking instruction of the patient in as careful detail as is required in successful diabetic teaching.

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GARNETT CHENEY, M. D. (210 Post Street, San Francisco).—Doctor Shepardson deserves a great deal of credit for calling our attention to the insulin treatment of underweight patients who are ambulatory. This subject should receive a much wider consideration in general practice than it has hitherto enjoyed. In my experience in treating about twenty-five patients, only three failed to receive marked benefit, and none were hospitalized for the course of injections.

Actually, the gain in weight is of secondary importance to the sense of well-being and increase in energy which occurs. Doctor Shepardson's patients, under his plan of treatment, have gained more slowly than with the plan I have followed. Patients under treatment receive a test dose of five units twice the first day, and ten units twice the second day, and then start a regular dose of twenty units two or three times a day for three weeks. All of the patients carrying out this plan have gained from eight to fourteen pounds within this period of time, the average being about ten pounds. In a few instances the individual dose was raised to twenty-four units, and in a few instances the treatment was continued for a longer period of time as a greater weight gain was desired. One patient increased the dose to thirty-two units three times a day, and gained a total of seventeen pounds in ten weeks.

In general the rapidity of weight gain is in proportion to the dosage, in that doses above fifteen units practically always create a very strong desire for food, resulting in an increased intake and increased metabolism. Small doses are of little value in putting weight on most patients. All patients are instructed from the very beginning to take extra carbohydrate feedings two hours after each meal which has been preceded by an insulin injection, and thus hypoglycemic reactions which occur earlier than in diabetes are prevented. One patient has been observed who was skin-sensitive to all forms of insulin.

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F. M. POTTENGER, JR., M. D. (Pottenger Sanatorium, Monrovia).—I wish to speak particularly of the sensitivities mentioned by Doctor Shepardson. In our use of insulin for increasing the weight of patients, we have noted reactions of varying degrees of severity in fourteen of nineteen tuberculous, and two of seven nontuberculous patients. Of these reactions, twelve were at the site of inoculation; three generalized urticaria; and three consisted of tissue absorption following the outline of muscles.

We have accounted for these reactions as probably being due to lack of available carbohydrate. Many patients with tuberculosis do not handle carbohydrates

well. Of all the sugars we have tried, lactose seems to be best tolerated.

By injecting glucose solution with the insulin, focal reactions were lessened. Urticarias were treated by intravenous glucose, and the tissue absorptions responded to forced feeding of carbohydrate, particularly lactose.

Pulmonary improvement was noted in most of the patients. We believe that insulin is a valuable adjunct in the treatment of malnutrition of patients suffering from chronic tuberculosis; but during such treatment a high carbohydrate intake should be maintained.

CHRONIC CARBON MONOXID POISONING— A PRESENT DAY HAZARD*

By PAUL MICHAEL, M. D.
Oakland

DISCUSSION by C. L. Connor, M. D., San Francisco; Gertrude Moore, M. D., Oakland; Robert T. Legge, M. D., Berkeley.

THE study[†] here presented includes, in rather condensed form, the results of various experiments conducted on chronic carbon monoxid poisoning since 1929. Detailed description of the various pathologic lesions found in animals cannot be included in such a short paper; but in order to visualize the clinical findings more clearly, the essential points only may be listed. All changes are based on vascular degeneration due to anoxemia, with resultant parenchymatous degeneration. Bilateral softening of the basal ganglia, degeneration of the ectomesodermic barrier, edema of the brain and degeneration of peripheral nerves occur. Other organs show a myocardial degeneration, pulmonary congestion with localized hemorrhages, parenchymatous degeneration of the liver and degeneration of skeletal muscles. As a matter of fact, no tissue or organ is immune, hence the bizarre picture we sometimes see. With elimination of the gas, restitution of tissues is surprisingly active, so anatomical and physiological function may be restored.

Acute poisoning has been mentioned in Roman and ancient Greek literature¹ as a means of torture, suicide or accidental death, but chronic poisoning was not brought to the attention of the medical or lay public until 1869 when Moreau² described the symptoms. He termed it the "insanity of cooks" and ascribed it to working over poorly ventilated stoves. Since that time data have been slowly accumulating in the medical literature, and much has been written on the diagnosis and treatment, especially by Henderson³ and Haggard⁴ in the last few years. The increasing

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† For coöperation in making this study possible, the author is indebted to the Highland Hospital, Oakland; the late George Posey, designer of the Posey Tube; the Coroner's Office, San Francisco, and to various garage workers in San Francisco and Oakland. He also acknowledges aid given in aviation study by the United Air and the Varney Air lines; the late Clare Vance, aviation engineer and pilot; Dr. Francis Shook, in whose plane much of the work was done; Dr. Eric Liljencrantz and Lieutenant-Commander F. B. Connell, U. S. N. R., Commander of Reserve Squadron 14, together with the officers and men of that squadron.

importance of this gas has been largely in response to the great strides and development of the manufacturing industries, together with the repercussions of this development—gasoline motors, automobiles and the complexities of aviation.

SOURCES AND CHEMISTRY OF THE GAS

Carbon monoxid is a tasteless, odorless, non-irritating gas containing 42.87 per cent carbon and 57.13 per cent oxygen. Wherever combustion occurs, carbon monoxid becomes a potential hazard, for it is produced as a result of incomplete combustion of carbon in the presence of an insufficiency of oxygen. It is not a true poison, but acts rather as an inert gas by diminishing the oxygen carrying capacity, causing an anoxemia and the formation of carbon monoxid hemoglobin. Carbon monoxid has an affinity for hemoglobin 300 times greater than oxygen, therefore it easily replaces this element after a brief exposure. Cerebral symptoms occur when one-fifth of the hemoglobin is taken up, while death may be expected if two-thirds is rendered unusable. In this paper carbon monoxid is to be expressed in the human body by percentage of hemoglobin saturation, while in the air it will be indicated by parts per 10,000 parts of air.

TOBACCO SMOKE

Sayers,⁵ Hamilton⁶ and others have very excellently covered most of the manufacturing hazards experienced in carbon monoxid poisoning in the several federal government and state bulletins. In unearthing the various hazards which may hold some danger for the average individual leading an ordinary life, the first common exposure is the smoking room. Jones⁷ and Armstrong⁸ have made experimental studies in this latter field and have found that incomplete combustion of tobacco results in the production of carbon monoxid. In my work I have found that in an unventilated room 8 by 10 by 12 feet one person may, by continuous smoking, develop rather high concentrations of the gas. Using cigarettes, pipe and cigars in that order in different experiments, the following concentrations were obtained: at the end of one hour, 0.5, 0.5 and 1.1 parts of carbon monoxid with a blood saturation of 0. At the end of two hours the figures were 2.0, 2.5 and 2.9 parts per 10,000 parts of air with a blood saturation of 2.3 per cent, 4.0 per cent and 5.0 per cent. At the end of three and one-half hours the figures were 4.0, 4.5 and 6 parts per 10,000 parts of air, with a blood saturation of 5.0 per cent, 6.5 per cent and 10 per cent. These results were all obtained in a room with practically no aeration, and cannot be cited as representative of the average smoking room where adequate ventilation prevails.

GARAGE WORKERS

In a series of 100 garage workers examined, 15 per cent of the men showed positive blood findings. The concentration of the blood slightly past mid-day, when the temperature was the highest and the workers the busiest, ranged from 8 per cent to 12 per cent saturation. Most of these men

were underweight, had pale, sallow complexions and complained of vague gastro-intestinal symptoms and lassitude.

STREET TRAFFIC

Casual pedestrians or those people traveling through the streets in various forms of transportation are probably not subject to any high or dangerous blood saturation. The problem rather is found in the study of people who spend a large part of their waking hours in the streets, such as traffic officers, street cleaners, taxi drivers and news sellers. I have followed for great lengths of time in the wake of large urban transportation buses and found that when they stop at intersections the surrounding air takes on a temporary but definitely high concentration of carbon monoxid. As newspaper sellers are located principally at these intersections, many were examined for blood saturation. At the height of evening traffic, twelve of the twenty-five persons examined showed blood saturations from 2 per cent to 4 per cent—safe for short exposures, but certainly of potential danger over many years' absorption.

FERRY TRAFFIC

Further investigation was carried on to determine any possible danger arising in ferry transportation. The average automobile ferry crossing San Francisco Bay has a capacity of approximately eighty or ninety cars. Estimating that motors are running for a period of at least six minutes during the unloading, nearly 1,000 cubic feet of carbon monoxid are produced each time the ferry discharges its load. For a brief time the air concentration goes as high as five parts, especially near the center of the boat. As the majority of the crew is forward directing traffic and exposed to the fresh air, this fortunately has not resulted in an industrial hazard. The time limit of exposure of the passengers, also, is so brief that no blood absorption was demonstrated.

AVIATION

The hazards of carbon monoxid in aviation are still under investigation. In this country Lieutenant Commander Joel J. White⁹ of the Medical Corps, United States Navy, has made numerous studies of naval planes of various types and showed carbon monoxid to be a definite source of danger, in many cases to both the pilot and passenger. The greatest hazards in aviation probably exist in the low grade poisoning when the pilot is not aware of any definite ailment, but suffers an impairment of health with a decrease in efficiency, and is therefore subject to possible accident. Most of the present day planes are propelled by one, two, three or more motors of the radial type, usually of nine cylinders each. Several types of exhaust disposal are employed, ranging from the single tube about twenty-four inches long for each cylinder to the more complex circular collecting rings. In the former, the exhaust pipes end abruptly slightly in front of the cockpits, and hence are potential hazards by blowing quantities of exhaust gas back past the passenger or pilot.

In the latter type, the various cylinders are connected with one or more collecting rings by flexible tubing or slip-joints. Provided there is no leakage at these points, there is very little chance for carbon monoxid to become dangerous, as the exhaust gas is brought down beneath the fuselage and is there permitted to escape. Until recently these collecting rings were constructed of ordinary steel and were sometimes subject to burning by heat from the motor. The usual method of heating planes at the present time is based on a device composed of a metal collar surrounding the collecting ring, and allowing the outlet of air from the collar thus heated by the exhaust pipes to heat the cockpits or cabins. Accidents and several near fatalities have occurred through the steel collecting rings burning and permitting the escape of carbon monoxid from the exhaust into the pilot seat or cabin. Until recently, therefore, passengers had no assurance that they would not be overcome by escaping exhaust fumes, but the more progressive companies have within the past few months replaced the obsolete type of collecting rings by more efficient ones constructed of stainless steel which can stand very high temperatures without destruction. In addition to this, more rigid examination of the slip joints for possible exhaust leaks has been instituted. The possibilities of poisoning of pilot or passenger in such more modern planes is indeed small.

At the present time many of the open cockpit planes employing the simple exhaust pipe for each cylinder are definitely classed as hazards; and no wonder: consider that large quantities of carbon monoxid are blown back toward the cockpits. This gas follows the air currents or slip stream generated by the revolving propellor, and small but definite quantities are sent around the right side of the fuselage, following an arc, and up on the opposite side. A probable suction action is created by the cockpits, and air containing carbon monoxid is attracted. Samples of air secured at many locations showed concentrations of gas as high as five and six parts per 10,000 at various points along the pathway taken by the air currents. Concentrations in the cockpits were greatest near the floor levels, and reached as high as three parts per 10,000 parts of air. At the level of the nose of pilot or passenger this percentage is naturally dissipated by cross currents of air, but blood saturations as high as eight per cent were observed after four hours of flight.

The recommendations made here are that all planes should employ collecting rings, and if heating units are installed, the plane should be equipped with stainless steel collecting rings and heating collars, or that water type heating be used.

VEHICULAR TUBES

The Posey Vehicular Tube is a common thoroughfare under the Oakland Estuary between Oakland and Alameda, and is manned by a superintendent and crew of fifteen men. It is 4,500 feet in length, thirty-seven feet in diameter, and is forty feet under water at low tide. At each end of the tube are eight large ventilating fans, four in-

take and four exhaust, with a maximum capacity of blowing 1,000,000 cubic feet of fresh air per minute and eliminating the same amount of waste air. During the crowded hours of traffic as many as 1,000 automobiles pass through the tube each way per hour. The ordinary composition of exhaust gas from automobiles consists of carbon monoxid 7 per cent, carbon dioxid 7 per cent, oxygen 1.5 per cent, nitrogen 80 per cent, benzol 3.2 per cent and illuminants 0.3 per cent. The average automobile is rated at forty horsepower, and each motor will produce two cubic feet per minute. In one hour, then, as high as 240,000 cubic feet of carbon monoxid are given off. The ventilating system, however, has been so efficient that the content of gas has been maintained at or below two parts per 10,000 parts of air, with approximately one-half of the fans in reserve.

Despite these low figures, after many months' employment, several of the maintenance men became aware of a train of symptoms which brought them independently to their private physicians. The officials of the tube, alarmed by the condition of the employees, asked for a medical survey, with establishment, if possible, of a diagnosis.

CLINICAL STUDIES

Symptomatically the men complained of frequent temporal headaches, dyspnea and slight palpitation on exertion, weakness, easy fatigue, anorexia and nervousness. Two of the men, both under 40, claimed impotence. Objectively, they presented loss of weight, pallor, hypotension with blood pressures reaching as low as 90/60; conjunctivitis, congestion of retinal vessels by bright red blood, pulmonary congestion and occasional tremors of the hands. Laboratory findings may be summarized as follows: Polycythemia, with red cell counts as high as 6,000,000, glycosuria occasionally and slight shift of the blood toward the alkaline with carbon dioxid combining power readings from 58 to 65. At first spectroscopic examination of the blood was employed with unsatisfactory results. Subsequently chemical analyses were used, and concentrations of carbon monoxid of five per cent to ten per cent were found.

These men served as an excellent group to trace the clinical findings of chronic carbon monoxid poisoning. Records of physical examinations before employment disclosed them to be free from any suggestive symptoms. They have been followed throughout their trouble to the present time, over a period of approximately four years. After the diagnosis was established it was obvious that improved conditions must be attained. Air-tight cubicles, largely of glass, were constructed within the tube to house the men while on duty, and into these rooms a steady stream of pure fresh air from the outside is blown. Working within these small compartments, the men steadily improved and at the present time are free from any symptoms of carbon monoxid poisoning. This not only resulted in removing a severe industrial hazard, but made it needless to increase the ventilating system, saving the county several thousands of dollars yearly in electrical consumption.

CONCLUSIONS

1. The essential pathologic changes, clinical and laboratory findings of chronic carbon monoxid poisoning are given.

2. Many of the hazards of every day life are studied, including smoking rooms, street traffic, ferry boats, garages, aviation and vehicular tubes.

3. Elimination of hazards and the improvement of working or living conditions are the recommended means of combating this condition.

4. Chronic carbon monoxid poisoning should be considered in many obscure illnesses.

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DISCUSSION

C. L. CONNOR, M. D. (University of California Medical School, San Francisco).—It is becoming more and more important to recognize chronic conditions which do not present outstanding symptoms. Classic descriptions of disease usually refer to practically a terminal stage, at which time little or nothing may be done for the patient. Doctor Michael has presented a clinical picture which appears to be fairly characteristic, but which certainly might be confused with the early stages of other diseases. A simple method of examining the blood for carbon monoxid now makes the diagnosis of chronic poisoning by this substance certain. Therefore, in addition to presenting an increasingly important present-day hazard, Doctor Michael's paper indicates the trend which scientific medicine must take—that is, the recognition of diseases in their early phases so that prompt measures may be taken to prevent or cure them. It is important to note that severe nerve cell degenerations, following severe carbon monoxid poisoning, are irreversible, and that a very acute poisoning by this substance may result in chronic invalidism should the patient recover.

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GERTRUDE MOORE, M. D. (2404 Broadway, Oakland). The consideration of this subject is timely indeed, for carbon monoxid exacts a death toll greater than all other gases combined, and twice that of typhoid fever.

The author's recommendation regarding the disposal of exhaust fumes from aeroplane engines is important, and as illustrating this, we are reminded of an incident in which a near-fatality occurred to two officers in the Army Air Corps while photographing the city of Chicago. A break in the exhaust line leading through the heater-jacket allowed exhaust fumes to enter the plane in sufficient quantity to overcome the pilot. The photographer, noting the plane diving at a terrific speed, went forward and found the pilot slumped over, unconscious, with his shoulder pressing the stick. By an almost superhuman effort he was

able to right the plane and safely land. Such dangers as these are the result of acute carbon monoxid poison; but, while not as spectacular, the dangers of chronic poisoning are just as real, and there is, as the essayist indicates, a great need of additional investigation to determine the deleterious effects on health resulting from prolonged exposure to small concentrations of carbon monoxid. There is no known poison which has so varied and so widespread an effect and, as Doctor Michael has shown, its frequency in every walk of life today makes it an ever-present menace not only in motor cars, aeroplanes, motor boats, and many of the ordinary occupations, but even in the home where gas appliances are used for cooking and heating, and incomplete oxidation is not at all uncommon. An interesting finding in this connection is reported by Hamilton, who studied four hundred workers of the same age and nationality in South Chicago, one-half of whom were steel workers exposed to constant small doses of carbon monoxid, and the other half were workers with no possible contact. Those who had not been exposed showed an average of 24 per cent greater muscle power than those who had been exposed.

The whole problem has an interesting relation to industrial insurance. It is not at all unusual for a gassed patient to recover consciousness and for a short period to return to apparently normal health, only to have the symptoms reappear and insanity or death result. In these cases there is always a serious question regarding compensation, the solution of which is put squarely up to the medical man.

So let us keep this constantly in mind in all obscure conditions, especially those cases in which neurologic symptoms are present; remembering, however, that the diagnosis of chronic carbon monoxid poisoning should never be made in the absence of a history of exposure to this gas.

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ROBERT T. LEGGE, M. D. (University of California Infirmary, Berkeley).—The general public, the miner, the industrial worker, and the housewife especially, should be interested in carbon monoxid poisoning, as it is the most widespread and toxic agent of modern civilization. Certainly it is good preventive medicine to continually campaign through education, and by the institution of safety measures against the dangers of this deadly gas. The scientists have developed accurate methods for its detection in the blood and atmosphere. The pathology is well understood, and efficient therapeutical measures have been devised.

Every physician should heed the immortal words of advice that Ramazzini offered to his students in taking histories for diagnosis—"What is your occupation?" This is a most important question which may often elucidate the cause of many obscure symptoms resulting from an occupational disease.

Chronic carbon monoxid poisoning, as pointed out by Doctor Michael in his paper, is a hazard that requires our earnest attention. Suspicion should be aroused when any worker or domestic who breathes an atmosphere wherein carbon monoxid is disseminated, complains of headache, namely, those in such occupations as cooks, ironers, garage men, linotypers, pressers in tailor shops, gas and smelter employees, etc. Nausea, dizziness, or weakness in the lower extremities is often prevalent in the first stages of chronic poisoning. Eventually the question is raised: What is the ultimate result of such an exposure to these workers—traffic officers, street venders, the public in garages, in vehicular tunnels, and other closed quarters? It is important to note that the greatest changes in the tissues found at postmortem are those of extensive fatty degeneration of the heart, kidney, wall of blood vessels and other tissues. This fact may explain the increase of cardiac diseases noted in mortality statistics. It is well known that housewives and female cooks suffer greatly from nervousness. The increase in psychopathic conditions should also be studied to ascertain whether, in addition to other obscure illnesses, this etiology is also chargeable to this deadly gas.

PERINEAL REPAIR*

A NEW METHOD

By HARRY S. FIST, M. D.
Los Angeles

THE levator ani is a compound muscle, the two sides of which are separated by a slit in which lie the vagina, urethra, and rectum. The pubococcygeus fibers, which provide much of the perineal support, extend from the pubes to the coccyx on either side of the midline, and are held together in the perineal body by involuntary muscle fibers.¹ During every delivery, the transversus perinei and pubococcygeus fibers linking them are torn apart; so that, unless the perineum be repaired, some dysfunction follows.

When mucous membranes are intact, and there is no immediate marked deformity to bring the laceration to one's attention, repair is neglected and often, months later, the patient suffers from several of a great variety of symptoms, the result of gaping vulva, subinvolution, rectocele, displacement and pelvic circulatory disturbances. Palpation reveals a thin perineal body containing merely skin and mucous membrane instead of firm, solid muscle fibers. Every labor causes some degree of perineal injury and should be followed by careful examination and repair.^{2,3}

USUAL REPAIR

When a perineal laceration is of sufficient extent to bring it to the attention of the attending obstetrician, repair is done before the patient leaves the table, or after an interval of several days. As a rule, the vaginal mucous membrane is opened, exposing the levator fibers, which are sutured under direct vision. Opening the mucous membrane exposes underlying tissue to the possibility of infection. When infection occurs, the repair breaks down. This is the reason why many obstetricians postpone perineal repair till a fortnight after delivery, when edema has subsided and infection is less probable; but this delay subjects the long-suffering patient to another anesthesia and operation.

The essential part of a perineal repair is not the area of denudation or the method of mucosa closure. Support depends on coaptation of muscles and of fascia. The separated levator portions, particularly the pubococcygeus fibers, must be firmly united anterior to the rectum.

METHOD OF IMMEDIATE REPAIR

About five years ago, in order to repair laceration of slight degree, or separation of the levators, the author devised a simple technique which brings perineal muscle and fascia together in front of the rectum by means of interrupted, buried, submucous, mattress, catgut sutures. Incision of the mucosa is not necessary. This simple, safe procedure, is especially advisable when assistance is scarce and sterilization uncertain. The materials

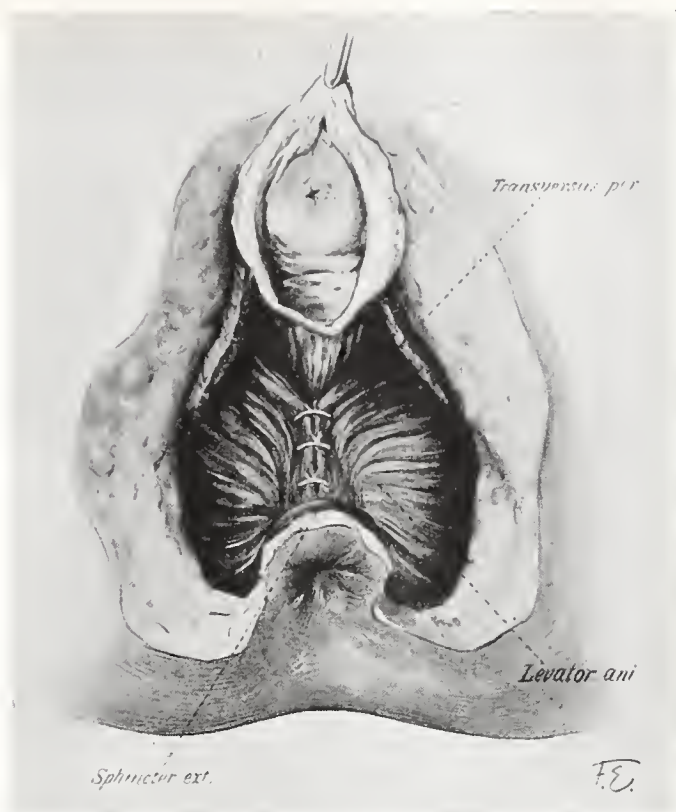


Fig. 1.—From Doederlein Kroenig (Operative Gynecology). Essential step of perineal repair. (Levator fibers united in front of the rectum.)

needed are: a strong, curved, noncutting needle (about the degree of curve of half a dollar), half-lengths of No. 2 chromic twenty-day catgut, a pair of thumb forceps, scissors, needle holder, and perineal retractor. A knowledge of the anatomy of the perineum is, of course, essential.

PREPARATION

With the newly delivered mother in the dorsal position, thighs extended, under anesthesia, cleanse the vulva and vagina, using any standard technique. Redrape the patient. Having finished with the cervix (which should be inspected after each labor and repaired if lacerated), place a gauze pack in the vagina to keep the field clear of blood. Perineal sutures may be inserted while waiting for separation of the placenta, but should not be tied before the uterus is emptied. The first suture is placed high in the vagina to catch the high levator fibers, and each succeeding suture is a little lower.

SUBMUCOUS SUTURES

Anyone with a knowledge of the anatomy of the perineum can insert a needle and suture so as to catch the levator fibers. In order to do this without incision of mucous membrane, the needle is reinserted each time at its point of exit, leaving only a puncture in the mucosa. The needle is brought to any desired location by moving it just under the mucous surface. Thus, when it is tied, the suture includes no mucous membrane. The repair is done as follows:

Retract the right vulvar tissues. Insert the needle on the left side of the vagina; sweep its point well laterally and posteriorly toward the spine of the ischium to secure a good wide bite

* Read before the Los Angeles Obstetrical and Gynecological Society, October 11, 1932.

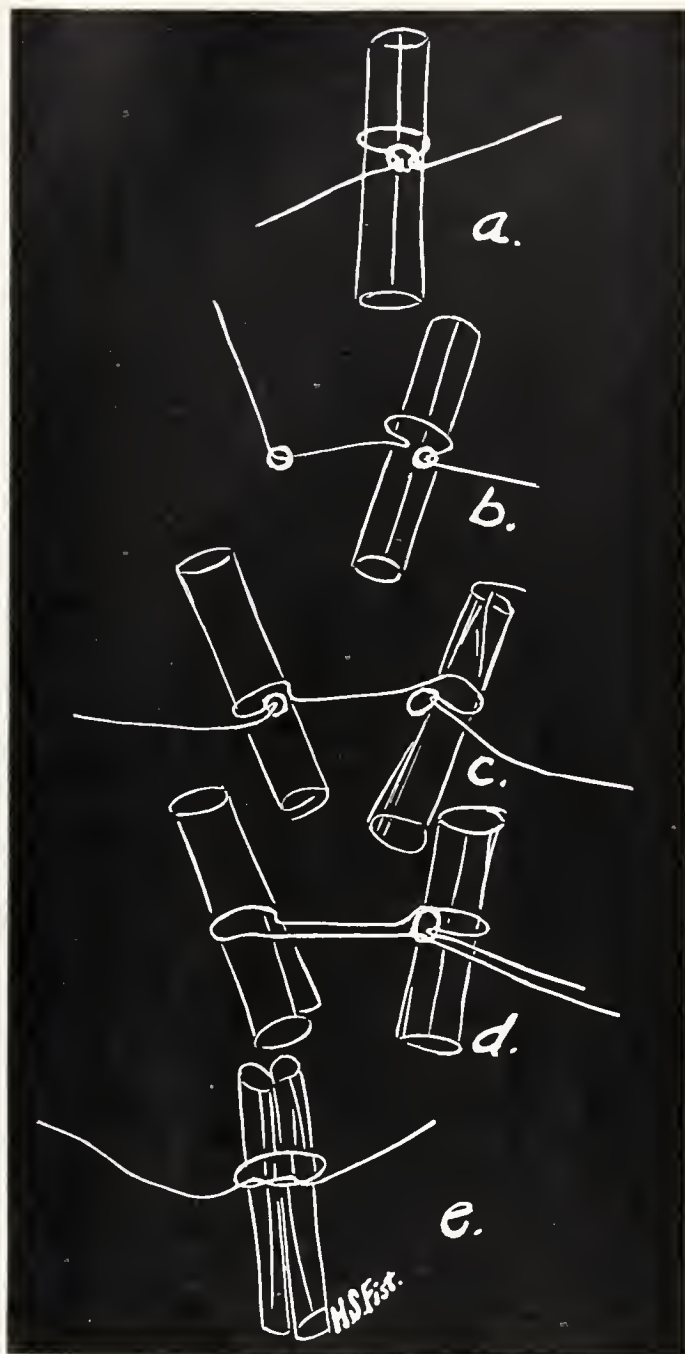


Fig. 2.—Diagram of insertion of sutures: (a) Suture encircles left levator bundle. (b) Needle inserted just under mucosa at point of last exit, brought across to right of vagina, and out. (c) Needle inserted at point of exit and made to encircle right levator, then out. (d) Needle inserted at last point of exit and brought across, just under mucosa, to point of original entrance, and out. (e) Tying suture unites the muscle bundles.

of the left levator ani fibers (principally pubococcygeus); then, carefully avoiding the rectum, bring the needle medially and finally anteriorly, out through the mucosa (Fig. 2, a). Reinsert the needle at the hole made by its exit; keep the point just under the mucosa and bring it across to the right side of the vagina and out (Fig. 2, b; Fig. 3). Reinsert the needle at the point of its exit, directing it laterally and posteriorly, then medially and anteriorly, to encircle the right levator fibers (avoiding the rectum); and again bring the needle out through the mucosa (Fig. 2, c). The suture now encircles levator fibers on each side of the vagina. Insert the needle at its last point of exit; keep it just under the mucosa, and bring it back across the vagina to the first point of insertion, and

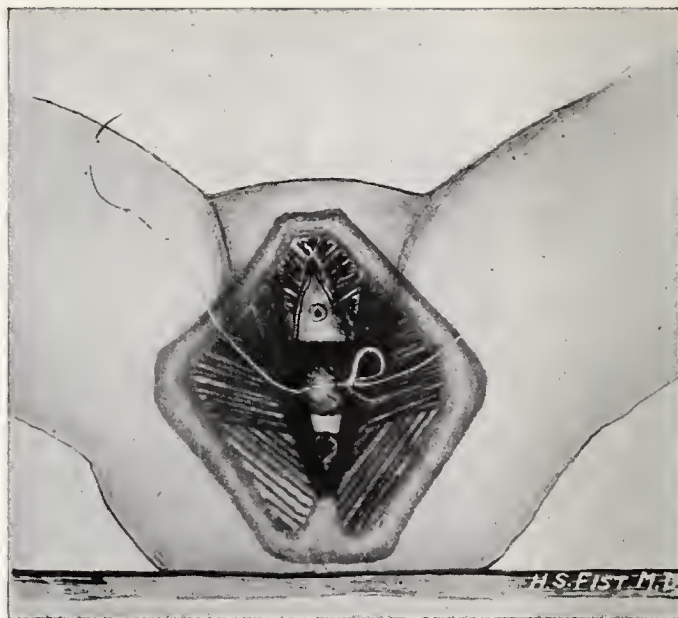


Fig. 3.—The left levator fibers have been caught, the needle brought out, and reinserted at the place of exit. The suture is now being pulled across just under the mucosa, after which the needle will be reinserted at the last point of exit, and caused to encircle the right levator fibers. It may then be brought back, keeping just under the mucous membrane, and out at the original point of insertion, when the two ends may be tied.

out (Fig. 2, d). The suture ends have now been brought together. Holding them taut with a hemostat, to keep the levator fibers together, simplifies insertion of the next suture. Use enough sutures to hold the levator fibers in good apposition. Before tying the sutures, relax the perineum by removing the vaginal pack and retractor and further extending the thighs. Insert a finger into the rectum to feel for sutures and remove any suture which has penetrated. Tie from above downward, snugly enough to coapt muscle, also fascia, but do not pull tightly, or the sutures will cut through when the usual postpartum edema ensues. The levator fibers of both sides are thus brought together between the rectum and vagina (Fig. 2, e). Cut the suture ends at least one-quarter inch from the knot. After completing the repair, palpate the perineum to make certain that the united levator fibers may be felt as a firm, thick mass of muscle.

WHEN MUCOSA IS LACERATED

When the mucous membrane is torn, or after episiotomy, repair is completed in much the manner described above except that the muscles may be more easily reached through mucosal openings. When the muscles have been sutured, the mucosa may be closed by the usual means.

RESULTS

This repair technique is recommended as routine treatment for every relaxed postpartum perineum which does not require open repair. Remarkably good results often follow the insertion of a single suture. This method as used by the author, has yielded uniformly satisfactory support. Repair has been made feasible when, because of lack of assistance or asepsis, other methods would not have been satisfactory. No case of perineal infection has developed, nor have the sutures

ever failed to hold. As a rule, patients have experienced very little perineal tenderness during the puerperium.

SUMMARY

Open repair of the perineum is the usual procedure, and is the method of choice for severe laceration or deep sulcus tears.

For slight laceration or postpartum relaxation of the perineum, the author recommends routine repair by means of immediate, interrupted, buried, mattress sutures approximating the levator fibers anterior to the rectum. This simple, easy method provides excellent support and minimizes the danger of infection.

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SURGERY IN THE TREATMENT OF PULMONARY TUBERCULOSIS*

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AND

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DISCUSSION by Harold Brunn, M. D., San Francisco; William C. Voorsanger, M. D., San Francisco; William Lister Rogers, M. D., San Francisco; Esther Rosencrantz, M. D., San Francisco.

SURGERY in pulmonary tuberculosis has reached the stage in which the patient has heard of its value and occasionally requests or suggests its application even before the attending physician. It, therefore, behooves us to have a working knowledge of the various forms of surgical therapy available and the indications for their use.

Every year many hundreds of patients having pulmonary tuberculosis are given the advantages of surgical therapy, yet these represent only a small minority of those patients who might be treated with benefit. In the New England States, Hawes and Stone¹ found that only 4.2 per cent of the patients are given the benefit to be obtained by use of the various surgical methods, and this is probably representative of the country at large. On the other hand, in the larger clinics from 15 to 17 per cent of the patients are treated by surgical methods, and it is conservatively estimated that 30 per cent of all patients with pulmonary tuberculosis could be benefited by the application of some one of the surgical procedures. This failure to make full use of available therapeutic measures has frequently been due to indifference to the spread of ideas, to too technical discussions or lack of information. Therefore the purpose of this paper is to point out briefly in general terms those surgical procedures that have become valuable in the treatment of pulmonary tuberculosis.

A consideration of the procedures used in the treatment of tuberculosis in any of its forms

shows that the success of the treatment depends to a large degree on the amount of rest given to the diseased part, and this is especially true in pulmonary tuberculosis. Since the function of respiration never ceases during life it is obvious that one is face to face with a peculiarly difficult problem if direct rest of the diseased lung (*i. e.*, actual limitation of motion as against mere decreased activity) is to be attained, and it then becomes necessary to turn to one form or another of pulmonary compression.

INDICATIONS FOR SURGICAL INTERVENTION

It should be clearly understood that surgical procedures are not intended to replace nonsurgical methods of treatment in pulmonary tuberculosis, but are to be considered as adjuncts to these methods. We wish repeatedly to point out and stress the necessity for the closest coöperation throughout the course of the disease between the physician and surgeon, as by this means only can the proper time for surgical intervention and the correct procedure for the particular case be determined. The majority of procedures used in surgical therapy fall under the category of collapse therapy of one form or another. Certain other procedures (*i. e.*, vascular ligations) are still in the experimental stage and are not available for general use.

Collapse therapy is to be considered not only in those cases of pulmonary tuberculosis whose response to modern conservative treatment has shown that the prospect of ultimate arrest by these methods is doubtful, but also in those cases in which the rate of improvement may be increased by such therapy. The exact time at which collapse therapy should be instituted is to be arrived at only by careful study of the individual patient. Each one must be treated as a new problem and all the evidence available from the clinical course, physical and radiologic examinations, is to be considered. Now if it appears that symptomatic treatment alone is not accomplishing the desired result, we may consider the advisability of one form or another of collapse therapy. Speaking broadly there are no absolute, invariable contraindications to collapse therapy; conversely, its indications and the particular form of therapy to be applied are determined solely by the exigencies of the case at hand.

THE ACTION OF COLLAPSE

The frequent observation that the partial or complete collapse of a diseased lung has been followed by improvement of the patient's status has led to numerous hypotheses aimed at an explanation of this observation. It is not our purpose to enter into a discussion of theory, but simply to point out the more acceptable modern opinions.

Nature's method of healing tuberculous lesions is by fibrosis. The first of the factors which seem to aid in the healing process is the mechanical rest, the actual immobilization of the lung. This reduction of motion is undoubtedly inextricably related to the alterations in the flow of blood and lymph which is in turn directly related to the distribution of toxic products. Thus it is observed that

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following collapse of a diseased lung there is usually a short period of a few days in which there is a rise in temperature, followed in successfully treated cases by a prompt remission of fever. This has been assumed to be due to a process of so-called autogenous tuberculinization. This process likewise seems to offer some explanation of the frequent prompt healing of the disease in the contralateral lung. However, healing does not always occur; sometimes there is retrogression of the process and it is assumed that the tuberculinization was in excess of that desired. This is more likely to occur in cases of massive involvement of the collapsed lung or where the disease in the contralateral lung was not of a fibrotic nature. Briefly, by collapse the absorption of toxins is reduced and the general powers of resistance of the patient are improved.

Certain mechanical difficulties due to fibrosis are relieved by collapse therapy. Thus the dilatation of the good lung, brought about by the pull of the fibrosis on the involved side, exposes this healthy lung ultimately to secondary infections and bronchial dilatations. These mechanical difficulties are alleviated by collapse measures.

The next major result of collapse is the closing of cavities. It has been found that the approximation of the walls of a cavity is a most important factor in the healing process. The statement has frequently been made that complete collapse of the cavity is necessary to healing, but it has been pointed out that frequently healing occurs with only partial collapse.² By collapsing cavities not only healing through fibrosis is assisted, but the retention of toxic secretions in the cavity is prevented, and the toxemia due to the growth of secondary invaders is reduced.

A frequent result of collapse therapy and one for which collapse is frequently undertaken is the stopping of hemorrhages. This is probably brought about by the relaxation and contraction allowed to fibrous tissue which in turn compresses the bleeding vessels.

From the patient's point of view not the least of the results of the collapse is the relief from distressing symptoms. Cough is frequently reduced and is less severe, and sputum is reduced in amount and is raised more easily. These results often follow very promptly upon the collapse, but sometimes the alleviation of symptoms is gradual. The stopping of hemorrhages, which are usually a most disturbing incident to patients, has a remarkable effect on the patient's attitude.

TABULAR SUMMARY OF INDICATIONS

A tabular summary of the various indications for which one may institute collapse therapy clearly shows its wide range of applicability. These indications are arrived at from a consideration of the above described action of such therapy.

METHODS OF SURGICAL INTERVENTION

At this point it may be well to consider the paths surgery has attempted to follow in its search for a rational means of attacking the problem of

TABLE 1.—*Indications for Collapse Therapy.**

1. To place the disease process under conditions most favorable to healing.	
2. To compensate for mechanical difficulties due to fibrosis.	
3. To obliterate cavities.	
4. To reduce the absorption of toxins.	
5. To control hemorrhage.	
6. To diminish the distress caused by certain symptoms.	
* Modified from Davies. ³	

pulmonary tuberculosis and then to note the present trend of its progress. These various paths are outlined in the following table (No. 2).

The direct methods have been essentially discarded. The direct application of various medicaments with the hope of influencing the tuberculosis lesion by either the tracheal or intercostal routes has been frequently tried and found wanting. It is obvious that only a minute portion of the lesion can be reached by any drug application made by these means. Moreover, the injection of irritating medicaments into the lung parenchyma, bronchi or cavities has even been found to be harmful.

Cavity drainage, either by the transthoracic or bronchoscopic routes, has been attempted with very indifferent results for centuries. In spite of past failures, sporadic attempts at its use are still undertaken. Sauerbruch, in 1920, reported rather favorably upon its application in certain selected cases.

Although a very limited number of successful cases of pulmonary resection for tuberculosis have been reported, this method is not to be advised. In the first place, it is a very major procedure. Moreover its very advocates have stated that its application should be limited to the resection of small lesions strictly confined to the apex or other absolutely localized foci, and that even then it should be combined with a local thoracoplasty. Obviously these are the very lesions which would be expected to respond to either sanatorium treatment or the simplest forms of surgical intervention. It is questionable, to say the least, whether tuberculosis is ever sufficiently limited so that a conservative resection might be expected to eradicate all of the disease process.

We thus arrive at a consideration of the various forms of collapse therapy. The rationale of this form of therapy has been pointed out above. It is with this general type of treatment that the

TABLE 2.—*Surgical Treatment in Pulmonary Tuberculosis*

METHODS	
I. Direct Therapy	
(a) Direct medication	
(b) Cavity drainage (transthoracic and bronchoscopic)	
(c) Pulmonary resection	
II. Collapse Therapy	
(a) Artificial pneumothorax (general collapse, selective collapse)	
1. Intrapleural pneumolysis	
(b) Hemidiaphragmatic paralysis (temporary, permanent)	
(c) Extrapleural pneumolysis	
(d) Oleothorax	
(e) Thoracoplasty (partial, complete)	
III. Methods of Experimental Stage	

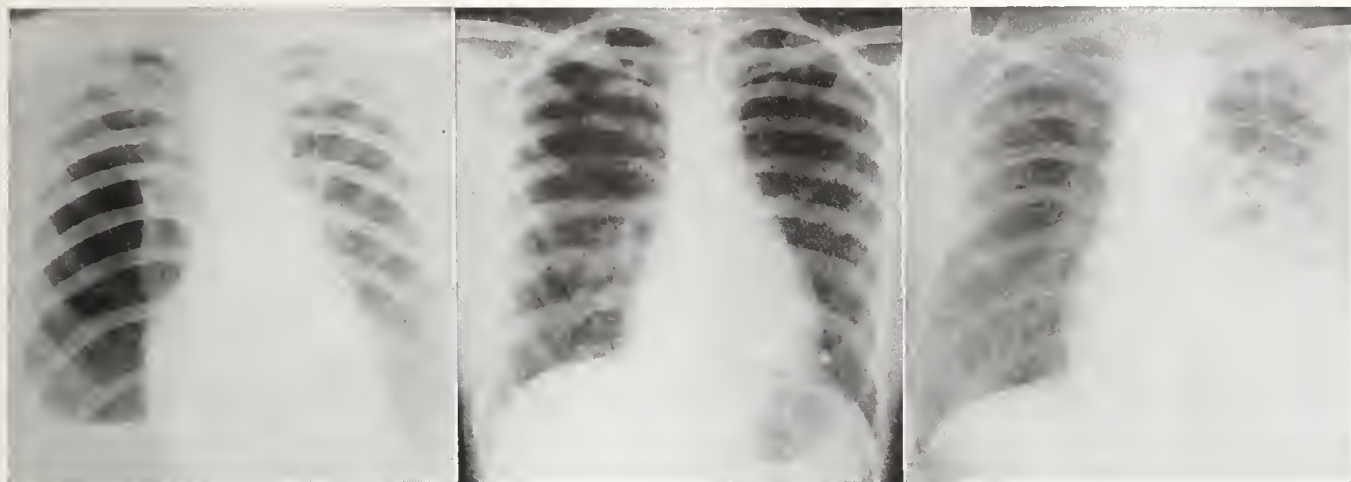


Fig. 1

Fig. 2

Fig. 3

Fig. 1.—Artificial pneumothorax: Pneumothorax on the right side, with a small amount of fluid at the right base. The right lung is practically completely collapsed. There are two pleural bands, extending from the visceral to the parietal pleura at the right top. The left lung is clear. The heart is slightly displaced to the left.

Fig. 2.—Selective collapse: Selective artificial pneumothorax collapse of the right upper lobe.

Fig. 3.—Phrenic avulsion: Two years after phrenicotomy, showing marked elevation of the left diaphragm and incident collapse of the lung.

majority of surgical procedures adaptable for combating pulmonary tuberculosis is concerned, and as a result of which sufficiently encouraging results are obtained to warrant the continued use of such procedures.

ARTIFICIAL PNEUMOTHORAX

The excuse for pointing out the value of an artificial pneumothorax in a paper on surgical procedures is not that we wish to suggest that the surgeon is required or even should be called upon to perform this simple procedure. On the contrary, we mention it solely because in a real sense it is the prototype of all forms of collapse therapy. Furthermore, we also wish to point out the advisability of supplementing certain surgical procedures with an artificial pneumothorax and mention other procedures which may increase the efficacy of some pneumothoraces in which adequate collapse has not been attained.

Artificial pneumothorax consists of the introduction of air into the pleural cavity, with the aim of collapsing the lung on the side in which the air is introduced. The customary procedure consists in gradually compressing the entire lung field by the repeated introduction of air into the pleural cavity at intervals of such frequency that each subsequent refill adds a greater volume than was left at the previous injection. This of course takes into consideration air absorbed in the interim. Recently it has been shown that it is often possible to collapse only the diseased portion of the lung. This is done by carefully regulating the intrapleural pressures, the desired result being obtained because the diseased lung is more compressible than the normal lung. This process has been termed "selective collapse."

When one of the surgical forms of collapse therapy has resulted in an inadequate or unsatisfactory collapse, or if it is felt that a more complete transient collapse will benefit the patient an artificial pneumothorax may be induced as a supplement to the primary procedure. This supplementary use of pneumothorax has been frequently

and successfully used in cases treated with hemidiaphragmatic paralysis and in thoracoplasty. Its more frequent use will undoubtedly increase the value of these procedures.

INTRAPLEURAL PNEUMOLYSIS

It has been found at various sanatoria that from 5 to 50 per cent of all cases of pulmonary tuberculosis require artificial pneumothorax therapy. Furthermore, of the cases in which pneumothorax is attempted, collapse has been reported inadequate in 20 to 70 per cent of all cases. However, in about 25 per cent of these cases in which the pneumothorax was unsatisfactory because of adhesions, this difficulty could be overcome by the procedure of intrapleural pneumolysis. The method in general use is that of Jacobaeus, introduced in 1913, although a few cases have been successfully treated by open pneumolysis⁴ or by the enucleation method of Maurer.⁵

The method of Jacobaeus consists essentially in the cutting of adhesions by a cautery introduced through a thoracoscope while the operative field is viewed through a second thoracoscope. Special instruments were devised for the operation by Jacobaeus and others. The method is best adapted to the freeing of thin string-like adhesions and is contraindicated in broad band-like adhesions, while the frequently met with apical adhesions are most difficult to remove because of their position. Certain dangers are inherent in the procedure, especially the production of hemorrhage, puncture of the lung and the production of an effusion.⁶ However, the operation has been performed successfully in such a large number of cases that in many clinics the procedure is considered a necessary adjunct to pneumothorax.

Because of the difficulties enumerated and because it is reported⁷ that cavities in 50 per cent of unsuccessful pneumothorax cases may be closed by hemidiaphragmatic paralysis this less dangerous procedure is preferred to intrapleural pneumolysis in cases of unsatisfactory pneumothorax; or the hemidiaphragmatic paralysis may be induced

as an adjunct to whatever collapse could be obtained from the pneumothorax.

Adhesions which might be sectioned by the method of Jacobaeus are shown in Figure 1.

HEMIDIAPHRAGMATIC PARALYSIS

The induction of a hemidiaphragmatic paralysis (phrenicus exairesis—phrenic avulsion) by an interruption of the motor-nerve impulses to the diaphragm through the phrenic nerve is the most frequently applied and simplest surgical method of obtaining collapse of the lung in the treatment of pulmonary tuberculosis. It may be employed as the initial procedure, may follow an unsatisfactory pneumothorax, and has been found to be of use following certain major procedures (*i. e.*, thoracoplasty) in which a completely satisfactory collapse has not been obtained. Likewise some are of the opinion that it is advisable to use a hemidiaphragmatic paralysis before any major thoracoplasty as a test of the patient's ability to withstand the more radical procedure.

Section of the phrenic nerve was first suggested as a treatment in unilateral tuberculosis by Stuertz in 1911, but in a large percentage of cases no paralysis or transient paralysis resulted from a carrying out of this operation. In 1922 Felix showed that this was caused by numerous anomalies of the phrenic nerve due to the connections of the accessory phrenic nerve. To overcome this, Felix proposed the usual modern procedure of phrenic avulsion or exairesis. This operation is performed under local anesthesia in a matter of minutes, and leaves an unobtrusive scar 2 to 3 centimeters in length. An effort is made to withdraw at least 10 centimeters of the nerve distal to the incision above the clavical, thereby assuring a complete and permanent paralysis.

There are methods other than phrenic avulsion for obtaining the hemidiaphragmatic paralysis. The nerve may be simply sectioned, which gives rise to a high percentage of failures, as was pointed out above. Transient paralysis may be obtained by injecting alcohol. Temporary paralysis, lasting for five or six months, may be obtained by crushing the nerve.

If the desired result has been obtained in the removal of the nerve, the paralyzed hemidiaphragm rises at once to an expiratory position unless prevented by adhesions. A gradual progressive rise then continues for six months to a year. Under the most favorable conditions the collapse obtained is in the neighborhood of one-sixth (400 cubic centimeters) to one-third (800 cubic centimeters) of the lung volume,⁸ while in pneumothorax or thoracoplasty complete collapse may be approached. The collapse of the diseased area depends to a great extent on the nature of the tuberculous process, the greatest degree of collapse having been found to occur in the proliferative rather than the exudative type of disease. However, the beneficial results of this procedure are due not merely to the collapse obtained, but likewise to the marked mechanical rest enforced upon the diseased lung.

Several thousand patients treated with hemidiaphragmatic paralysis have been reported in the

literature, and the results obtained with these cases have been very encouraging. Little danger is involved in performing the simple procedure, the mortality being less than 0.5 per cent for all operators, and more recent reports show this to be now more nearly 0.2 per cent. Complications, including mortalities, occur in about 1.2 per cent of the cases, hemorrhage and pneumonia are the most frequent and most likely to prove fatal, while others occasionally reported are Horner's syndrome, mediastinitis, pyothorax, pulmonary embolism, and pulmonary edema. No one has complained of any inconvenience from the permanence of the collapse, and several cases of successful bilateral diaphragmatic paralysis indicate the ease with which compensation takes place.

It is impossible to make any adequate statistical analysis of the therapeutic results of hemidiaphragmatic paralysis because of the wide variance in the severity of the disease in cases selected by different operators. Unilateral disease is the ideal, and most operators select this type of case as nearly as possible; but Matson⁸ treated thirty-four cases in which the disease was active or progressive in the contralateral lung and of these cases 52 per cent were much improved and only 5 per cent were unimproved or worse.

O'Brien⁷ has reported the results of 500 phrenic nerve operations. Of these, 288 showed disease in the contralateral lung and this process healed in 26 per cent, improved in 52 per cent, and was activated or continued to spread in 10 per cent of the cases. Of 378 cases with cavitation 50 per cent of the cavities were closed, 82 per cent were closed or reduced, and 19 per cent were stationary or larger. Cavities in the lower lobes were closed more readily than cavities in the upper lobes, yet 46 per cent of the upper lobe cavities were closed. He likewise found that, of forty-two cases with cavitation in which pneumothorax was not satisfactory, when these were treated with hemidiaphragmatic paralysis the cavities in 50 per cent of the cases were closed, while in only 6 per cent were the cavities unchanged or larger. These results, as reported by Matson and O'Brien, are typical of the experiences of all operators and seem to warrant the enthusiasm shown for this method of applying collapse therapy.

As the maximum collapse obtainable from hemidiaphragmatic paralysis is in the neighborhood of 800 cubic centimeters, a larger volume of collapse may frequently be desired. It has been found that this is often obtainable by the induction of a pneumothorax and that the hemidiaphragmatic paralysis plus the pneumothorax gives adequate therapeutic collapse in many cases when either procedure alone has proved unsatisfactory. Recently attention has again been called to this fact,⁹ and there is no reason why the combined procedure should not be used more frequently than it has been in the past.

SCALENIOTOMY

In the past few years the suggestion has been made that scaleniotomy, performed in conjunction with phrenic evulsion, would greatly enhance the

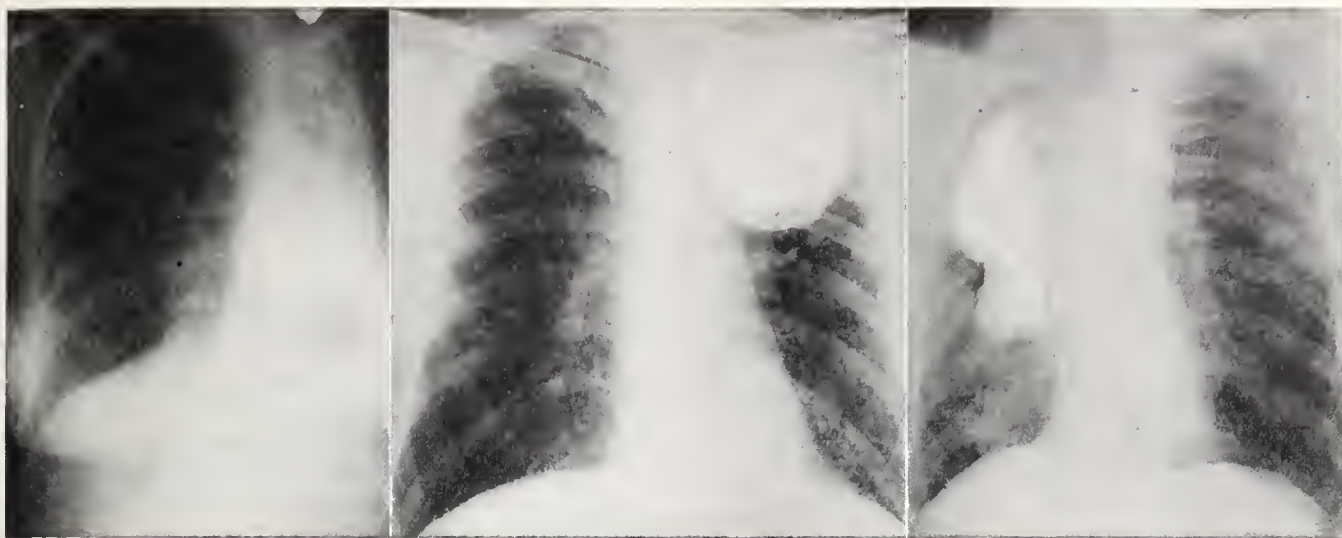


Fig. 4

Fig. 5

Fig. 6

Fig. 4.—Thoracoplasty: Three months after completion of second stage thoracoplasty, showing complete collapse of the left lung field and slight incidental scoliosis.

Fig. 5.—Paraffin filling: There is a rounded mass of paraffin filling obliterating the apex of the left pleural space, with incident compression of the lung in this area.

Fig. 6.—Paraffin filling: This illustrates some of the complications which may occur with paraffin filling. The plomb, which originally occupied the position similar to that in Fig. 5, is seen to be breaking up and a portion of it has worked its way downward.

efficacy of the latter procedure.^{10, 11} Scalenotomy consists in a section of the scalene muscles in the neck. These being accessory muscles of respiration a further limitation of movement of the thoracic cage, especially at the apex, was to be expected. The operation is performed simultaneously with that of phrenic evulsion and through essentially the same incision. Our own experience has led us to conclude that although scalenotomy is a relatively simple and feasible procedure, the clinical results attained thereby do not warrant its performance.¹²

OLEOTHORAX

The introduction of oil in large amounts into the pleural cavity for therapeutic purposes was first advocated by Bernou.¹³ This procedure has found few adherents in America, but is held in considerable favor on the Continent, especially among the French. In the treatment of pulmonary tuberculosis, its use in selected cases may be either (a) as a disinfecting agent, especially in tuberculous empyema, or (b) as a substitute for thoracoplasty in certain cases of spontaneous pneumothorax or complicated cases of artificial pneumothorax or (c) as a compressing agent where intrapleural pneumolysis is not feasible.

If reëxpansion is desired a vegetable oil is used, whereas if constant compression is desired a non-absorbable mineral oil is employed. In either instance an aromatized oil may be added in graduated strengths should a disinfecting action be required. Either oil can be removed by aspiration should the necessity arise.^{14, 15}

It appears to us that oleothorax has a definite though small field and that it should be employed more frequently, especially in cases of tuberculous empyema and in those thick-walled cavities where pneumothorax does not give a satisfactory collapse but which a more major procedure is contra-indicated.

THORACOPLASTY

Resection of portions of the ribs to obtain collapse of a tuberculous lung was first undertaken in 1885 by de Cernville, who removed only short sections of the ribs overlying the diseased area anteriorly. Brauer and Friedrich performed the first "thoracoplasty" in 1907 by removal of practically the entire lengths of ribs, one to ten. In the few cases treated by this operation the mortality was exceedingly high and it was soon apparent that, although correct in principle, modifications were necessary to make the procedure a success clinically. In 1911 Wilms and Sauerbruch independently performed, with only minor differences, what has now become the adopted procedure, the Wilms-Sauerbruch paravertebral thoracoplasty. When the unmodified term "thoracoplasty" is used it is usually this procedure which is under consideration.

There are forms of thoracoplasty other than the paravertebral type which, although limited in their scope, may be applied either alone or in conjunction with other surgical procedures when proper indications exist. Some of these procedures should be listed here. Parasternal thoracoplasty consists in the removal of sections of the ribs at the sternum and finds its chief usefulness in supplementing the collapse obtained by a paravertebral thoracoplasty. Also a few ribs may be resected locally for the collapse of small circumscribed areas. Then complete posterior removal of ribs one and two has been performed with very satisfactory results in locally collapsing the apex. Finally the periosteum may be removed from the ribs over a localized area, the periosteum and extrapleural tissue packed down tightly over the area to be compressed, and then after an interval when the new ribs have grown, permanently compressing the area, the packing and the original (now dead) ribs may be removed.

The Wilms-Sauerbruch paravertebral thoracoplasty consists of the removal of graduate sections of the vertebral ends of the ribs. These are usually graded somewhat as follows: 2 to 5 centimeters are taken from the first rib, 4 to 8 centimeters from the second, 8 to 10 centimeters from the third, 10 to 15 centimeters from the fourth to the tenth, and 8 to 10 centimeters from the eleventh. Archibald¹⁶ recommends the fitting of the resection to the case, taking greater sections over diseased and fibrosed areas. The operation is usually done in two stages, the second stage usually being done ten days to two weeks after the first stage, and either the upper or the lower ribs may be resected as the first stage.

Because of the major nature of the procedure the proper selection of cases for thoracoplasty is a most important problem. An ideal case would be one of unilateral chronic fibrous tuberculosis without complicating disease in which adequate sanatorium treatment had failed to arrest the disease; pneumothorax had been unsuccessful due to adhesions which could not be freed by intrapleural pneumolysis; phrenic avulsion had been performed without arresting the disease, and the resultant slight reaction had shown the patient's resistance to be adequate to withstand the thoracoplasty. This process of selection makes thoracoplasty the method of last resort which, because of the major nature of the procedure, is its correct position, and if in a properly selected case thoracoplasty has failed to arrest the disease, it is questionable if any further surgical procedures will have any markedly advantageous effect.

In some clinics the most rigorous standards are applied to the selection of cases, there being a feeling that it is as unfair to ask a surgeon to operate on patients that have progressed to a critical condition as it is to ask a surgeon to operate on a widely metastasized cancer of the breast. This may be correct, but there is a growing opinion that after every effort has been made to select cases at the proper moment there will still be presented numerous cases who either from neglect or apprehension have passed the point when any cure seems possible but for whom one's last slim chance remains in thoracoplasty, and these should not be denied. The statistical records resulting from the treatment of these cases will show a high percentage of failures, but the actual accomplishment with these "forsaken" cases will be rewarding.¹⁷

The degree to which one may deviate from the most rigid standards must therefore come from experience. This is particularly true with regard to the amount of involvement of the good lung, the amount of fever, and the complicating lesions. Certainly extensive cavitation in both lungs is a contraindication, but numerous cases are reported in which small cavities in the contralateral lung have healed following thoracoplasty. Certainly a high fever is a warning to go cautiously, but if there are no other contraindications, fever in itself cannot be considered too seriously, and patients running daily temperatures up to 102 and 103 degrees daily have been successfully treated. Com-

plicating diseases must be given due consideration, especially diseases of the heart. In thoracoplasty the heart is put under a greater strain than under any of the other surgical procedures because of the suddenness and completeness of the collapse, the moving over of the mediastinum, the danger of mediastinal flutter, and the severity of the operation itself. Therefore disease of the cardiovascular system offers a more serious contraindication here than in any other procedure.

Many cases of thoracoplasty have been reported in the literature and any review of results must, therefore, be selective. Roughly the combined results from a large number of cases show one-third practically cured, one-third improved, and one-third unimproved, worse, or dead;¹⁸ the risk of death being approximately the same as in operation for carcinoma of the intestine. As has been pointed out above, the results depend to a large extent on the selection of cases and for this reason mortality rates have varied in different series from 1 to 50 per cent.

Brown¹⁹ has reported two groups of cases for comparison. One group of thirty-six were given thoracoplasty following the failure of other methods; the other group of nine, in apparently the same condition, refused the advised thoracoplasty. After nine years, nine of the thirty-five are dead, six, or 17 per cent, of those receiving thoracoplasty have died of tuberculosis, while of the nine cases refusing thoracoplasty six, or 67 per cent, have died of tuberculosis, only one is clinically well, and two are still in a sanatorium. These groups are small, but make a most valuable comparison.

Bruns and Casper²⁰ have reported a series of ninety-six cases treated at the Fitzsimons General Hospital, where the tendency has been to broaden the scope of thoracoplasty and offer the patient a "last chance." Of these, 26 per cent were apparently cured, 16 per cent had the disease arrested, 5 per cent were improved, 4 per cent were unimproved, and 41 per cent died. The causes of death in this series are probably illustrative of those obtaining generally; they were shock, heart failure, spread of the disease, and wound infection.⁴

We have already pointed out that the statistical results depend to a large extent upon the nature of the cases selected and have only slight relation to the good that may result in doing thoracoplasties as a last resort. To illustrate this still further we may point out some of the results reported by Carter⁴ on fifty-three cases of thoracoplasty. By dividing his cases into good, moderate, and poor risks, he found that thirty of the thirty-three good risks recovered, while of the whole group thirty-five are apparently well.

In a large majority of cases thoracoplasty is surprisingly nondeforming because the shoulder girdle from which clothes hang is undisturbed. In a small number of cases an undesirable degree of scoliosis results from the collapse of the chest wall, but this may generally be avoided by proper postoperative care. Cameron and Mercer¹⁷ have devised a "plexaloid" cast which partially pre-

vents this scoliosis and at the same time increases the collapse. This is a light semirigid cast which is applied to the good side while straps tend to draw in the diseased side. Archibald, to obtain the same result, uses a corset made particularly for thoracoplasty cases, and likewise stresses the importance of the patient maintaining the correct posture after the operation.²¹

In discussing thoracoplasties we have dealt only with paravertebral thoracoplasty because it alone is of widespread applicability and interest, while the other types of thoracoplasty which have been referred to, although of no less value in the treatment of cases where the indications exist, are of such specialized usefulness that we have considered it wise to leave their consideration to papers of a more technical nature.

PARAFFIN FILLING

Paraffin filling (extrapleural pneumolysis—apicolysis) (Plombierung) falls into the category of procedures of limited usefulness. It is one of the methods of obtaining localized collapse and consists in the introduction extrapleurally of a mass of paraffin to obliterate the space between the thoracic wall and the collapsed lung. Other substances such as muscle and fat have been used, but none have been as satisfactory as paraffin because they tend to atrophy and become absorbed. The procedure is especially indicated in cases of apical disease where thoracoplasty is not desired. While most often used in unilateral apical disease, it may also be employed in bilateral apical disease. It has been found that small multiple cavities in the apical region may be closed most successfully, while large cavities and cavities in the lower lobes cannot be handled adequately. Frequently a patient will submit to paraffin filling while refusing thoracoplasty because the introduction of the paraffin is less severe and deforming than is the thoracoplasty.

Certain difficulties are met with in paraffin filling. Sepsis occasionally sets in, necessitating prompt removal of the wax with the institution of drainage. In the period in which the procedure was being introduced, cases were reported in which the material broke into the lung, worked out through the chest wall, or worked into the base. Occasionally the lung or pleura have been broken into, necessitating abandoning the operation. However, some cases have carried the paraffin well for eleven years, and as the technique and composition of the paraffin have been improved a large part of the difficulties seem to have been overcome. All the difficulties attached to the introduction of a foreign body in any portion of the human body apply as well in the introduction of paraffin into the thorax. Therefore we feel that this is not essentially a surgical procedure.

In a satisfactorily treated case a small exudate may form after the introduction of the wax. This usually soon resorbs and a fibrous connective tissue capsule 2 to 3 millimeters in thickness forms around the filling. It is exceedingly difficult to obtain complete collapse of cavities by this method

but, although desirable, this is not always necessary for healing. Numerous cases have been treated and have been reported in the literature, but it will not be advisable to discuss them here. A complete description of the method with a discussion of the indications, difficulties, and results may be found in the excellent article by Rogers.²²

RECAPITULATION

The last word in the surgical treatment of pulmonary tuberculosis is still anxiously awaited. Nevertheless we have endeavored to show that "collapse therapy" in one or another of its forms has earned a deserved niche in our armamentarium. We believe that surgery, kindly advised, under fullest coöperation between physician and surgeon, offers distinct hope to a vast number of tuberculous patients and therefore warrants your sympathetic employment.

490 Post Street.

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DISCUSSION

HAROLD BRUNN, M. D. (384 Post Street, San Francisco).—The general profession still has a rather hazy idea concerning the operative methods now in use for the treatment of pulmonary tuberculosis. Doctor Brown's paper has, therefore, given a very timely review of the surgical methods of use in tuberculosis. He wisely points out that this work requires the closest coöperation between the specialist and his surgical consultant.

There is still a large group of patients for whom collapsed therapy by means of artificial pneumothorax is impossible or only partially feasible, but where surgery is required. We believe that these persons should be given an opportunity to take advantage of one or another form of surgical collapse best fitted for the individual case. It is our belief that in the great majority of cases the paravertebral thoracoplasty of the Wilms-Sauerbruch type is fundamentally the best operation. In our experience the use of paraffin filling for apical cavities has not been at all successful. It may be adapted to a limited number of patients with small cavities at the apex centrally placed or in patients having apical cavities on both sides, where it would seem inadvisable to jeopardize or put out of commission a large portion of good lung such as happens in a complete thoracoplasty.

The main problem at the present time which, it seems to us, is still unsolved is the handling of large apical cavities with considerable fibrosis which, in the ordinary thoracoplasty operation, do not close and where there still persists a moderate amount of secretion with positive sputum. These patients may be better, perhaps, following surgery, but are not cured. One is then required to do secondary operations, removing ribs anteriorly or anterolateral. For such patients we are now removing the first and second ribs entirely from the costal cartilage to the transverse process posteriorly and such portions of the third, fourth and fifth, as may be required, and we believe our results are better than heretofore. It is too early to report on the final outcome in these patients. To this operation we have added in our later patients a pneumolysis, separating the pleura and the cavity from the vertebral gutter, as recommended by Bruns and Casper. They point out that the cavity in the vertebral gutter is the portion which fails to collapse in ordinary thoracoplasties.

We believe that Doctors Brown and Truman have given a very clear and concise picture of the different procedures which are of use in the treatment of tuberculosis at the present time.



WILLIAM C. VOORSANGER, M. D. (490 Post Street, San Francisco).—Doctors Brown and Truman have presented a very complete review of the many procedures classified today under the head of collapse therapy. The first and most important of these and, incidentally the oldest, is artificial pneumothorax, which should always be attempted before major procedures such as phrenic-nerve resection and thoracoplasty. I have failed on several occasions to induce a pneumothorax, and after the fifth or sixth week of trial have succeeded. Phrenic exaeresis has not proved to be of as much therapeutic benefit as some, particularly O'Brien, have claimed. Whereas some patients have been helped by it, in others we have obtained hardly any result and occasionally a rapid spread of the infection. It should in most cases be performed as a preliminary operation to thoracoplasty. Artificial pneumothorax after exaeresis has in some patients proved very successful. I have a patient who had a basal cavity compressed by pneumothorax with good result; voluntary

expansion of the lung after two years with complete fibrosis; recurrence six months thereafter, recompression attempted but unsuccessful; phrenic exaeresis performed, spread of the infection upward, and then a very successful recompression with almost dramatic disappearance of cough and expectoration. The recompression, therefore, saved the patient from a thoracoplasty, which we had in mind if more conservative measures had failed and which seemed impossible before phrenectomy.

I am glad to hear the authors stress the value of coöperation between physician and surgeon in the selection of risks for thoracoplasty. Naturally, a physician who has carried a patient through two or three years of tuberculosis must be the one to make the selection for the surgeon, who in turn must pass upon the surgical fitness or risk. If this procedure is followed, more carefully selected cases of pulmonary tuberculosis will come to surgery and our figures of successful results will be improved. The ultimate result needs improving. We have too much recurrence of activity after a year or two years. We have, fairly often, too little actual cessation of the two main symptoms of tuberculosis, cough and expectoration, although in all patients we see a marked diminution. Thoracoplasty marks a great step forward in the treatment of pulmonary tuberculosis; its failure to completely obliterate activity may be placed squarely upon improper selection of risks. The physician has often been charged with waiting too long before recommending thoracoplasty. This charge can only be substantiated in a small percentage of patients. The other belief which is gaining ground, to rush all patients with unilateral extensive lesions to thoracoplasty, will prove of inestimable damage unless we spread the doctrine so well enunciated by the authors, that thoracoplasty must be reserved for that small group of patients who after a definite period of careful conservative treatment still show activity and symptoms, but whose physical condition is good.

Regarding other surgical procedures mentioned by the authors. I quite agree with them that "plom-bierung," or paraffin filling, is going to prove a rather negligible surgical procedure.

Oleothorax has also but limited value. It has been suggested in tuberculous empyema after aspirating the pus. Many of our empyemas are accompanied by bronchial fistulae, but in this class oleothorax is of absolutely no value and sometimes proves harmful. My own experience with oleothorax has not proved very satisfactory.

The authors have rightly shown us that there are several collapse procedures, each of which has its place and each to be used only after careful selection.



WILLIAM LISTER ROGERS, M. D. (Medico-Dental Building, San Francisco).—The authors have condensed and presented a large subject in a very practical and sane manner. The close coöperation between physician and surgeon in the treatment of pulmonary tuberculosis has been well emphasized. That this condition actually is taking place is, I believe, well borne out by the fact that the incidence, in one form or another, of the minor surgical procedures has of recent date greatly increased. In other words, the surgeon is seeing many early cases which do not require a total thoracoplasty, but in whom some form of surgical therapy is deemed advisable. There are, however, unfortunately, many patients suitable for some form of collapse therapy who are taking the cure at home, under the guidance of the family doctor; or even in sanatoria, but in whom surgery is not being considered for one reason or another.

Greater stress has been rightly placed on our more accepted procedures. Unless one has a wealth of material or ample opportunity to develop his technique for such procedures as adhesion cutting, etc., he will probably do better by utilizing phrenectomy or some form of thoracoplasty for the necessary surgical procedure to be employed. Matson, in Portland, has developed

the adhesion-cutting to a nicety. We have had considerable difficulty with this procedure to date and, while the procedure appears simple, the complications may be very grave. On the other hand, we have used the paraffin fill on a group of cases, and are still using it in selected ones and so far have no reason to regret our choice.

From a surgical viewpoint I believe there are two exceptionally difficult groups of cases to obtain satisfactory collapse. First, the enormous apical thick-walled cavity, and secondly, the patient with an existing secondary bronchiectasis of the right middle or lower lobe. A bronchial stenosis may or may not be present. If present it is almost, if not entirely, impossible to rid the patient of all sputum by means of a thoracoplasty. In this suspected group bronchoscopy may prove of diagnostic value and also the guarded use of brominol. Bronchoscopy should not be used without due thought and consideration, as it is by no means an entirely innocent procedure when dealing with active pulmonary tuberculosis. However, it is of great value in the above group of cases, for if the bronchiectatic portion of lung can be proved to be free from tubercle bacilli, as is sometimes the case, lobectomy may be considered.

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ESTHER ROSENCRANTZ, M. D. (San Francisco Hospital San Francisco).—I agree with the statement that a larger percentage of tuberculous patients than those now receiving surgical treatment would probably benefit by one of the procedures described. To enable these patients to profit by these measures of relief there should be a closer coöperation than now exists between surgeons and physicians. Especially is this the case in those patients with chronic ulcerative tuberculosis, who stay year after year in tuberculosis hospitals, whose condition has improved to such an extent that there is no fever whatsoever, and who are apparently well except for the occasional cough and persistent positive sputum.

The tendency is to consider these patients incurable and suitable for routine medical treatment only. If, however, one considers how often the pathologic condition in the lung changes over a long period of time when the patient is improving, and how patients who on admission were bilateral, eventually fibrose on one side, while the other side remains active, and if one studies these patients from the standpoint of possible surgical intervention, I think that the number of patients who might be treated by one of the methods described in this paper would be found to be considerably higher.

There the responsibility rests with the physician since it is he who has constant access to the patient, and it is he who follows the course of the disease from the time the patient first comes for treatment.

THE LOCAL TREATMENT OF ECZEMA IN INFANCY AND CHILDHOOD*

By HIRAM E. MILLER, M. D.
San Francisco

DISCUSSION by Samuel Ayres, Jr., M. D., Los Angeles; Albert H. Rowe, M. D., Oakland; Clifford Sweet, M. D., Oakland.

THIS paper will consider briefly the local treatment of eczema in infancy and childhood from the dermatological standpoint. I do not believe that local treatment alone will cure most children with eczema. It must be combined with

dietary, allergic and other procedures. Neither do I believe that internal treatment alone will cure all of them. It must be used in conjunction with rational local therapy. The best results are obtained when pediatrician and dermatologist work together. Practically, however, a pediatrician with some dermatological training, or a dermatologist with a knowledge of pediatrics, can generally obtain satisfactory results.

Internal treatment is governed by a knowledge of the underlying cause in the individual case. Local treatment requires a knowledge of the reaction of different types of inflamed skins to various remedies. Some of this information can be obtained from textbooks, but most of it will come only with experience.

The choice of the remedy depends upon the type of the eruption, its severity, its location and extent, as well as climatic conditions. Each individual skin has certain idiosyncrasies as to drugs, as well as to types of medication. Some skins will not tolerate ointments, no matter what they contain; others may become irritated when lotions are applied.

Local medication should be mild at first, and should not be frequently changed in stubborn cases. A small number of remedies carefully handled will cure most patients. Certain remedies will give brilliant results with one physician, and yet always irritate in other equally skilled hands. It is best, therefore, to use only the remedies with which one is thoroughly familiar.

GENERAL CARE

In the treatment of any type of eczema, there are certain underlying principles that must be followed. All sources of local irritation should be removed before topical applications are considered. The child must be kept out of the sun, wind and overheated rooms. Ideally, during the winter months, the child's room should be heated and the windows kept open. The clothing should not be coarse nor irritating, and the child must not be dressed nor covered too warmly. Soap and water should not be used on eczematized areas. Olive oil or some similar bland oil may be used for cleansing purposes.

Diapers should be changed as soon as possible after being soiled. They must be carefully washed with a mild soap and thoroughly rinsed. Rubber pants should never be worn over the diapers by a child with an eczematous tendency.

Hospitalization is desirable, and necessary for many infants with extensive eczema. It often hastens recovery, and permits the carrying out of mechanical adjuncts to therapy. It also separates the child from distracted parents, and allows them to obtain some rest. It frequently changes an irritable and ungovernable child into a composed and happy one.

CLASSIFICATION

For descriptive purposes, as indicated in Table 1, there are four general types of eczema occurring in infancy and childhood:

* From the Division of Dermatology, Department of Medicine, University of California Medical School, San Francisco.

* Read before the Pediatrics Section of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

TABLE 1.—*Types of Eczema of Infancy and Childhood*

1. Overweight type	3. Intertrigenous type
2. Seborrheic type	4. Impetiginized type

Occasionally, the eruption in a child may be distinctly of one type. Generally, however, two or more types of the disease will be present at the same time, or during the course of the disease. This classification, however, will facilitate the discussion of therapy.

LOCAL THERAPY

The successful treatment of eczema is difficult without a knowledge of the use of crude coal tar. Table 2 explains its use:

TABLE 2.—*On the Uses of Crude Coal Tar*

Bi-product in the manufacture of coal gas			
1. Applied undiluted to localized areas of eczema at three-day intervals.			
2. Used in a paste or ointment, never under a bandage. To be removed daily with olive oil.			
1. R Crude coal tar		2. R Crude coal tar	
Zinc oxid aa .3- 2		Zinc oxid aa .3- 2	
M. and add		M. and add	
Corn starch 15		Petrolatum q.s.a.d 30	
Petrolatum q.s.a.d 30		M. sig. locally b.i.d.	
M. sig. locally b.i.d.		to dry areas	
3. R Crude coal tar			
Zinc oxid aa .3 2			
M. and add			
Paste Lassar q.s.a.d 30			
(no acid)			
M. sig. locally b.i.d.			

Formula 3 has given the most satisfactory results in my hands.

The treatment of the various types of eczema is shown in Tables 3, 4, 5 and 6:

TABLE 3.—*Treatment of Overweight Type of Infantile Eczema*

Feeding of most importance in this type.
Local applications must be soothing.
Lassar's paste under mask; splints to arms.
Calamine lotion or calamine cream.
Ultra-violet light; occasionally x-ray therapy.
Crude coal tar preparations.
5 to 10 per cent naftalan in Lassar's paste (without acid).

TABLE 4.—*Treatment of Seborrheic Type of Infantile Eczema*

Scalp: Remove crusts with olive oil.
R Resorcin 3-1.2 1-3% sulphur,
Glycerin q. s. ammoniate of mercury
Petrolatum q. s. 30 or yellow oxid of
M. sig. locally to scalp after mercury may be used
removing crusts
Body: Care in cleansing skin; apply soothing lotions or
pastes: 2% crude coal tar; 10% naftalan or 1-2% am-
moniate or yellow oxid of mercury, all put in Lassar's
paste (without acid).

TABLE 5.—*Treatment of Intertrigenous Type of Infantile Eczema*

1. Exclude lues and monilia infections.
2. Cleanse with oil; wash diapers thoroughly; do not use rubber pants; keep areas dry.
3. Dusting powders, lotions or pastes superior to grease.
Stearate of zinc. Equal parts of boric acid and talc.
May add 25 per cent calamine, 25 per cent zinc oxid and ½ to 1 per cent camphor.
Lotion nigra and aq. calcis, equal parts. Calamine lotion. Lassar's paste, etc., are of value.

TABLE 6.—*Treatment of Impetiginized Type of Infantile Eczema*

1. Removal of crusts with boric acid compresses.
2. Application of 1 per cent ammoniate or yellow oxid of mercury in Lassar's paste (no acid).
3. Coryza, otitis, scabies, pediculosis capitis may be the underlying cause.

COMMENT

The successful treatment of eczema in infancy and childhood demands considerable attention to details. It requires more than the mere application of a grease. The long duration of the disease, as well as the probability of recurrences, should be explained to the parents early in the course of treatment. Fortunate indeed is the practitioner who is called to treat these children late in the course of their disease.

384 Post Street.

DISCUSSION

SAMUEL AYRES, JR., M. D. (2007 Wilshire Boulevard, Los Angeles).—I am in complete agreement with Doctor Miller's views regarding the importance of crude coal-tar in the treatment of these cases. To secure the best results, the physician should confer with his favorite pharmacist regarding the details of compounding this remedy and, having satisfied himself that the druggist is able to prepare a satisfactory ointment, he should instruct his patients to have the prescriptions filled at that place. As Doctor Miller has indicated, the coal-tar and zinc oxid should be mixed separately; then the cornstarch and the petrolatum separately, and then these two mixtures combined. This should result in a smooth, coal-black paste. If the color is gray, green, or brown, you can be certain that it was not made properly and that it is very likely to irritate.

I do not agree with Doctor Miller in insisting that the tar ointment should not be covered with a bandage. On the contrary, I insist that it should be bandaged. This accomplishes several things: it insures that the areas are kept covered with the ointment, it prevents scratching, it prevents soiling of the linen, etc., and it insures against exposure to sunlight, which would be most irritating since coal-tar exerts a photosensitizing effect on the skin. I have never observed any deleterious effects from covering the parts to which the ointment has been applied.

However, if coal-tar is used for more than two or three weeks continuously, a pyogenic folliculitis occasionally develops, which usually clears promptly on changing to a weak ammoniated mercury ointment. Coal-tar ointment is contraindicated in the presence of follicular infections, but it is extremely efficacious not only in the ordinary allergic eczemas, but also in eczematoid eruptions due to yeasts or fungi, or to bacteria, as in cases of infectious eczematoid dermatitis.

Dermatology and pediatrics are greatly indebted to Dr. Charles J. White of Boston, who introduced crude coal-tar therapy in eczema.

One other type of eczema which has not been mentioned is a more or less generalized oozing or exfoliative, due to arsenic. I have seen two such cases in small babies, in whom arsenic in abnormal amounts was found in the urine and which cleared up under the oral administration of sodium thiosulphate, with a bland external application such as cocoa butter or plain Lassar's paste. The source of arsenic in both cases was probably in the form of medication which the mother was taking during pregnancy.

With Doctor Miller, I would emphasize again that local treatment alone is quite inadequate in the successful management of most cases of infantile eczema.

ALBERT H. ROWE, M. D. (242 Moss Avenue, Oakland).—Eczema in infancy and childhood is usually due to food allergy, though inhalant and contact sensitizations are of importance, especially in older children. To aid in the determination of the allergic etiology, skin tests with all foods eaten, and with important inhalant and contact allergens to which the child may be exposed, are indicated. The skin-sensitizing bodies to the causative allergens may not be present, though children are more apt to react than are adolescents or adults. Because of this fallibility of the skin reaction, trial diets and test environmental control may be necessary to help in the discovery of the fundamental allergies. The necessity of such trial diets has been emphasized by Blackfan and Schloss, and more recently by Hill and Cohen. Hill's article on "Eczema in Infancy" in the *Journal of Pediatrics* not only describes local therapy detailed by Doctor Miller, but discusses diets based on positive and negative skin reactions. For the milk-sensitive child, Sobee, as described by Hill, and more recently Cemac, recommended by Cohen, are of definite value. The child who gives positive reactions to animal emanations, miscellaneous substances, dusts, and possibly pollens, with or without reactions to foods, necessitates attention to diet, environment and contacts if control of eczema is attained. Local therapy, as described by Doctor Miller, must be used with practically all patients, whether or not allergic control is carried out. With the elimination of the allergenic factors, the eczematous lesions require much time to disappear and are hastened by dermatologic procedures, so tersely described in this paper by Doctor Miller.



CLIFFORD SWEET, M. D. (242 Moss Avenue, Oakland). I agree whole-heartedly with Doctor Miller's point of view. The child who has eczema must be studied thoroughly and treated carefully with all the means at our command.

Since hearing his paper last April, I have used crude coal-tar more than I had formerly, and have found it very useful. All diapers should be boiled daily, as well as thoroughly washed and rinsed. For the impetiginized lesions it is often necessary to use a stronger ammoniated mercury than the one per cent ointment. After making certain that the patient's skin is not hypersensitive to ammoniated mercury, a stronger ointment may be prescribed. In severe cases it is often necessary to remove the crusts oneself or have it done by another experienced person; few mothers will do it thoroughly.

In addition to all other attention to detail, much effort must be expended in carefully explaining to the parents, not once but many times, the problem to be solved. I emphasize what Doctor Miller has said, and add in brief the explanation which I have found comforting to perplexed and worried parents:

1. Eczema is not a disease.
2. Eczema is not contagious.
3. Eczema is not evidence of tainted blood, and no family has aught to be ashamed of because some member has it.
4. Eczema is evidence that the individual reacts too readily to foreign proteins. This reaction to proteins is universal in all human beings, varying only in the degree of its severity.
5. Proteins are present in all living structures, and therefore the offending protein may not be contained in the food substances which are our chief source of protein food.
6. The child with eczema is in every way a normal, healthy human being to whom we will give our best efforts in order to assist him over his present time of very real and distressing difficulty. Fortunately, in the vast majority of babies with eczema the acute hypersensitiveness diminishes after the first several months, and the body learns to live more successfully with its varied protein intake and contacts; just as by experience and education the child learns to become a successful member of a varied and often irritating human society.

FRACTURES AT THE LOWER END OF THE RADIUS—THE ROLLING-PIN METHOD FOR THEIR REDUCTION*

By WILLIAM ARTHUR CLARK, M. D.
Pasadena

DISCUSSION by John Dunlop, M. D., Pasadena; William F. Holcomb, M. D., Oakland; Frank A. Lowe, M. D., San Francisco.

FOLLOWING fractures near the wrist, accurate apposition of the fragments is necessary for function as well as appearance. Slight offset or angulation in the radius or ulna at this site will result in noticeable deformity which would not be apparent in regions where the bones are more thickly covered with soft tissues. Also, function may not be restored 100 per cent unless anatomic reduction is accomplished. The ugliest and most crippling deformity is caused by radial deviation and anterior displacement of the distal fragment. The classical Colles's fracture may also result in slipping or settling of the distal fragment toward the radial side, and perhaps also posteriorly, carrying the wrist and hand with it. This may occur even two or three weeks after reduction, especially if the ulna styloid has been broken, thereby loosening the anchorage of the carpus to the ulna, or if the patient is elderly and union slow with some absorption in the fragments. It may occur also as a result of imperfect reduction. If the distal fragment is left with a very slight offset or slight tilt, there is a tendency for the slight deformity to become a bad deformity, due to the constant pull of the overlying tendons.

REDUCTION METHODS

Primary reduction to anatomic position, followed by careful splinting, should preclude these difficulties. Indirect methods of applying force to the short distal fragments are frequently ineffective, resulting perhaps in partial reduction, but leaving more or less offset in apposition. Extension on the hand with countertraction on the forearm gives a force which is expended mostly on the tendons, very little being applied to the bone fragments. Flexion, pronation, and adduction of the wrist, though sometimes necessary, are usually not sufficient for complete restoration of normal position. Most surgeons have abandoned these indirect, indefinite manipulations for the direct application of force to the bone fragments. Scudder, Roberts and Kelley, and the textbooks of others describe methods of reducing Colles's fracture by pressure with the operator's thumbs on the distal fragment, accompanied by manipulation and traction.

ROLLING-PIN METHOD

When pressure with the thumbs fails, something harder with which to push against the distal fragment is necessary. After experimenting with various sizes and shapes in wood, I found that the most serviceable thing to use in reducing these

* Read before the General Surgery Section of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.



Fig. 1.—Showing the rolling-pin and method of its application.

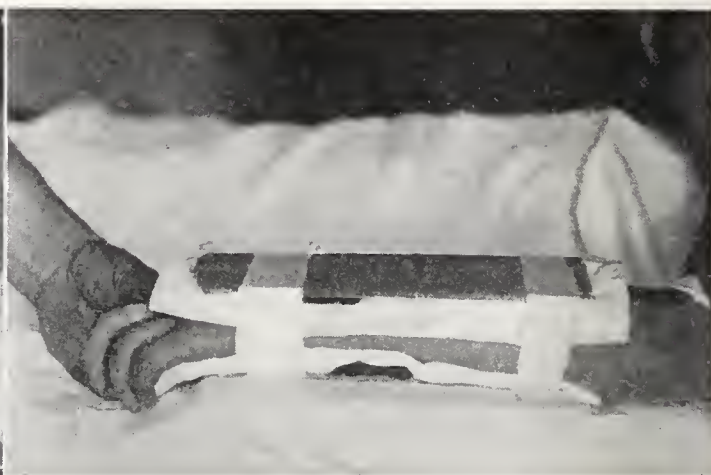


Fig. 2.—Splints showing pads (black) which hold fragments by pressure.

fractures is a roller about one inch in diameter and five inches long, the ends being smaller than the middle so that it can be conveniently handled. With this simple instrument the force can be accurately placed, easily controlled and carefully changed in position and direction. Much greater and more definite force can be obtained with it than with the thumbs or fingers because it is hard and resistant when pushed against the fragment. The soft tissues of the wrist, together with the soft tissues of the thumbs, make too thick a pad between the thumb bones and the wrist bones for transmission of the force. With the elimination of part of this soft padding, the hardwood of the rolling-pin comes in close contact with the bone, pushing aside some of the soft tissues over the wrist.

The patient should be lying down with the broken arm on a firm table. Adequate anesthesia is essential, either local or primary general. The arm is laid palm down over a triangular-shaped wooden block which serves as a fulcrum under the anterior aspect of the radius about two centimeters proximal to the fracture. The assistant holds the elbow down firmly against the table; and if there is excessive posterior displacement of the distal fragment, he also holds the hand in hyperextension at the wrist. The operator, facing proximally with relation to the arm, places the roller across the dorsal aspect of the radius at right angle to the shaft just above the distal fragment. With one hand on either side of the patient's wrist, the operator's thumbs are hooked over the handle of the roller. Firm pressure is made so that the roller is felt to be right down on the bone. This pressure is maintained as the instrument is rolled distally against the distal fragment. It first impinges on the posterior corner of this fragment, the force thus being in a distal direction with relation to the fragment. As the roller continues on toward the wrist, the force changes gradually from distal to anterior, thus pushing the fragment into normal position. This rolling process usually has to be repeated several times. If palpable deformity persists, more force in the anterior direction should reduce it. Of course, it is possible to go too far and get a slight anterior position of the distal fragment. One can

prevent this—make the method foolproof, as it were—by removing the triangular support from under the radial shaft and laying the arm on the firm flat table-top, palm down, with only a thin pad under the shaft when doing the final anterior push. This thin pad fills up the normal curve of the radius just above the wrist, keeping the shaft from being pushed anteriorly, while the distal fragment is stopped by the table.

The fractures of both radius and ulna from 3 to 5 centimeters above the wrist, with complete posterior displacement and overriding of the distal fragment, can be easily reduced by the roller method. The term "easily" is used in a comparative sense, with relation to other methods of extension and manipulation. I have not failed to reduce one of these fractures in the past three years by this method, while formerly open reductions a few days later, after struggles and failures at closed reductions, were frequent. These fractures are no longer a source of dread, provided they come for treatment within the first twenty-four hours.

MODIFICATION OF THE ROLLER METHOD

It has recently been found that a roller of smaller diameter is best for the initial application of force against the overriding distal fragment. The arm is placed over the wooden prism support, as for Colles's fracture. The assistant holds the elbow down with one hand, and with the other he grasps the patient's hand and bends the wrist in hyperextension so that the distal fragment stands up almost perpendicular at right angle to the shaft. The operator presses the small roller (one of the handle ends of the large roller may be used) against the dorsal aspect of the shaft, just above the fracture, and rolls it down against the distal fragment. The first impact comes against the dorsal cortex near the proximal end of this fragment. The force at this stage must be in a distal direction, its line practically parallel with the shaft. The smaller roller enables one to apply the force as nearly as possible to the *end* of this fragment. This end is pushed distally until the overriding is corrected. At this point the assistant brings the patient's hand down, thus allowing the distal fragment to be pushed over the

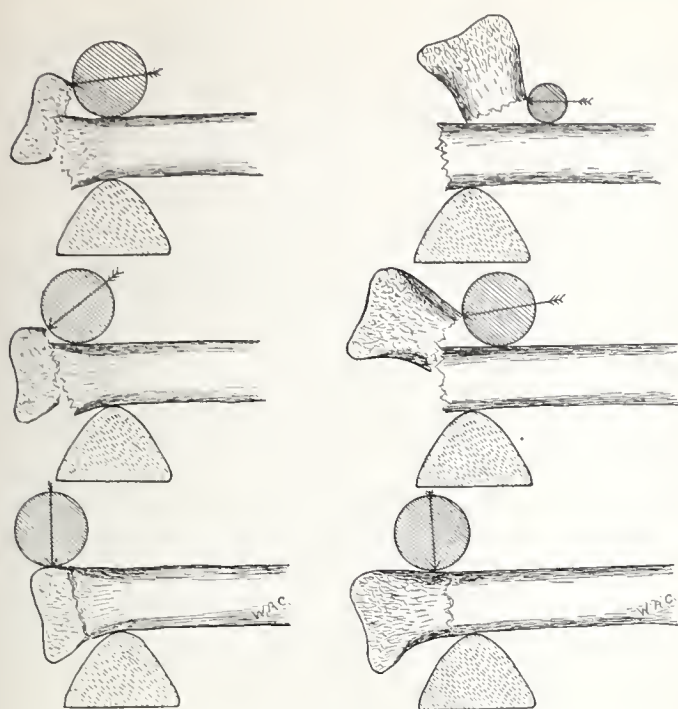


Fig. 3.—Longitudinal section of radius. Arrows show change in direction of force as the roller is rolled over the distal fragment. Left, Colles's fractures; right, fracture 4 cm. above wrist, small roller at first.

dorsal cortex of the proximal. The larger roller is now used to give the final force in an anterior direction, which pushes the fragment in line with the shaft. The entire maneuver may have to be repeated to make the distal fragment slip around the corner of the posterior cortex of the shaft—the keynote of success for perfect reduction. The final rolling smooths out any jog in the fragments.

This is the type of wrist fracture usually encountered in children, although occasionally seen in young adults. The typical Colles's fracture is almost never seen in children. Only one such was found in sixty-five cases of fracture near the wrist in patients from three to twenty years of age, and that one was a boy of eighteen. They get either a fracture 3 to 5 centimeters above the wrist, or a separation of the epiphysis. The epiphyseal separations, with or without fracture of the cortex, are also amenable to the roller, the technique being the same as that for Colles's fracture.

IMMOBILIZATION METHODS

For immobilization after reduction, anteroposterior wood splints are best. They can be accurately applied with felt pads to produce pressure at the proper places over the fragments. They also permit easy inspection of the skin for possible pressure sores. The chief objection to plaster casts is that the location and degree of pressure on which we depend for maintaining position cannot be accurately controlled, either while the plaster bandage is being applied, or subsequently. With splints the pads can be seen after the adhesive straps are applied and can be easily shifted if necessary before putting on the gauze bandage. I wish to condemn the use of stock splints, shaped to the hand and wrist, especially the so-called Walker splint. If such splints are put on with no pressure pads and no dorsal splint, deformity is likely to recur. It seems that too much depend-

ence is put on the splint alone, thereby creating a feeling of false security. The wrist is comparatively flat—at least the skeletal part of it is—and a flat splint is more adapted to its immobilization than one with a trough-shaped surface.

The same mechanical principles should be observed in splinting as in reduction; that is, the splints should act as levers with three points of force: a pad serving as a fulcrum, anterior to the shaft just above the fracture; another pad posterior to the distal fragment; and the third point of counterpressure at the distal end of the posterior splint over the muscles where no pad is needed. Should the styloid of the ulna be broken off, the splints should be shaped to produce an ulna deflection of the hand and carpus to avoid the tendency to radial deflection.

I have used this method in twenty-seven cases to date, and the results have been so satisfactory that I would recommend it to others for a trial at least.

65 North Madison Avenue.

DISCUSSION

JOHN DUNLOP, M.D. (63 North Madison Avenue, Pasadena).—I have listened with interest to the foregoing paper of Doctor Clark, and wish to state that I have seen many x-rays of his cases and have been struck with the remarkably accurate reductions which he has obtained by this method. I have not seen the patients clinically, so cannot vouch for other than the x-ray examinations.

In considering both bone fractures of the forearm, I should think that the method was not so accurate or safe as reduction over the fluoroscope, unless this method could be used over the fluoroscope, in which case I feel that there might be a field for it. However, reductions over the fluoroscope of both bones are usually not difficult, unless there is intervening tissue.

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WILLIAM F. HOLCOMB, M.D. (230 Grand Avenue, Oakland).—Doctor Clark has given us a very ingenious, although somewhat complicated method of reducing fractures of the lower end of the radius. The x-ray pictures which he has demonstrated show beyond doubt that he is proficient in this method, and bespeaks of his skill therein.

It is my opinion, however, that more skill is necessary, and more mechanical ability used in order to reduce a fracture by this method than by the simple method of manipulation which has proved, in most hands, satisfactory. I was permitted to read this paper in March, and at that time there came under my care an explosion fracture of the lower end of the radius. The fragments of the radius were both displaced dorsally and ventrally.

It occurred to me that the pressure of the fulcrum below, and roller above, would make a very satisfactory reduction. A manual attempt was first made, which was not satisfactory. The second attempt was made with the roller and fulcrum and, probably due to my mechanical inability, the result was very little, if any, improved.

I feel, therefore, that while this method may be useful in his hands, it is a complicated method and is entirely unnecessary in a large majority of the cases. Where difficult fractures of this type are encountered, as in the breaking up of an impaction or in late cases with newly formed callus, a Thomas wrench is eminently satisfactory.

As far as immobilization in plaster is concerned, it has always proved more satisfactory, in my hands, than wooden splints. I find that pads under wooden splints slip out, that the patients are able to remove and alter them, particularly in the case of children. Plaster of paris can be molded nicely to fit the arm, and does not constrict if it is properly applied.

FRANK A. LOWE, M. D. (870 Market Street, San Francisco).—Doctor Clark presents a method of reduction which has given to him good and satisfactory results in twenty-seven cases, so the rolling-pin method must have its merits. I agree that the grasping of the fingers, and trying to exert any impression on the displaced fragments, can meet with nothing but utter failure; the latter I have seen numbers of times in watching the novice work. I feel that we cannot standardize our fractures into direct posterior or anterior displacements, and therefore I cannot see where the rolling-pin method can be applied to any advantage in oblique, comminuted or transverse fractures of the medially or laterally displaced types.

Reductions that Doctor Clark can accomplish with his mechanical device, I can reduce, plus a greater percentage of the other common displacements, by the thumb-and-finger method, applying my own modifications of the latter and adding certain tricks of the trade that are essential to maintenance of the reduction once accomplished.

In Doctor Clark's hands the rolling-pin works well; in my hands direct thumb-and-finger fulcrum, with adequate hyperflexion, hyperextension, adduction and abduction, together with correct amount of force to engage the ends of the bones, works well. The latter method has yielded most excellent and satisfactory anatomical repositions and perfect results. It is a serious situation and a retrograding of good teaching that, as soon as a young surgeon sees a fracture, he should allow his brain to become a revolving mass of cog-wheels, with no particular clear thought in view, when a little simple thought and judgment would tell him how and what he is to do without the use of barbarous instruments, such as wires, staples, nails, plates, ice-tongs, etc.

Fracture work, as it stands today, is in a state of chaos and needs a few good leaders in medical schools to teach the art and mechanics of manipulative and nonoperative control of fractures.

I do not like the clamp-like pressure that two padded splints afford, with additional pressure pads and circular strips of adhesive to maintain and prevent displacements of the fractured ends. Splints are invariably getting out of adjustment each week, and have to be changed or replaced and taped and re-bandaged. I believe this to be a bad feature, along with the impossibility of preventing supination and pronation of the forearm; the latter two movements are the cause of many fractures slipping after having once been ever so beautifully reduced.

Clamp-like pressure, constriction by adhesive tape bands to hold the splints, dangers of ischemic palsy, displacements of fragments, supination, pronation, nerve and tendon injury, can all be avoided to the minutest degree by a properly padded plaster of paris cast, immobilizing the wrist and elbow joints. The cast can be fenestrated for pressure pads, if the latter are needed.

The reduction is accomplished, an assistant maintains the same and holds the extremity in proper position while the padding, which is taken from a one-pound roll of best grade Johnson & Johnson (long fiber) absorbent cotton, is placed on the hand, wrist, forearm, elbow, and arm by the surgeon and nurse. The cotton padding is reinforced where necessary and bandaged into place by a sleazy gauze bandage, so that a snug-fitting dressing is made; and over this the plaster of paris bandage is wrapped and a cast is formed and perfectly fitted to the normal contour of the extremity, and after the setting this is trimmed and split on the posterior surface to prevent circular constriction. In Colles's fractures and epiphyseal displacements, the hand is deviated to the ulnar side so as to give a moderate pistol-gripping at the wrist joint, and the latter partially flexed. These two deviations, with various artifices, prevent radial and posterior displacements in a way that no other methods can equal. The forearm is placed at a right angle, with the arm in full supination. The cast remains in place not less than six weeks in young subjects, while either the cast or further splinting is many times necessary from two

to six weeks longer in elderly persons, where there is apt to be a delayed union. The latter can be diagnosed by palpation, inspection, careful watching, or perhaps checked by re-x-raying.

All fractures should be radiographed before and after setting, in both anteroposterior and lateral views.

✱

DOCTOR CLARK (Closing).—The rolling-pin is not necessary in all cases; some are easily reduced with the fingers. The method is offered as a refinement in technique for changing an incomplete reduction into a good reduction. The advantage over the Thomas wrench is, that with the roller the point of pressure can be changed so much more easily and delicately than with the wrench. Lateral displacements can be corrected by changing the direction of pressure accordingly.

I have never noticed a displacement after reduction due to pronation or supination, and do not think immobilization of the elbow necessary for fractures less than four centimeters above the wrist. If a cast is applied displacement is likely to occur during its application, and subsequent correction is much more difficult than with the splint method. The trough-shaped cast does not give as firm and secure fixation as flat splints against the flat wrist.

THE NASAL SINUSES—THE PRESENT STATUS OF THEIR TREATMENT*

By ANDREW B. WESSELS, M. D.
San Diego

DISCUSSION by Robert C. Martin, M. D., San Francisco; Chester H. Bowers, M. D., Los Angeles; Rea Ashley, M. D., San Francisco.

THERE has been distinct progress in the medical and surgical procedure, as well as in the diagnosis of sinus disease itself, during the last few years. The acute infections with severe pain and temperature are usually readily recognizable. Transillumination and radiography make the diagnosis more or less certain. If drainage can be readily established with cocain and adrenalin shrinkage, these infections will usually take care of themselves with the use of heat and nasal irrigations. In the cases where there is obstruction to drainage, puncture or lavage through the normal opening, as in the case of the maxillary sinuses and resection of a portion of the middle turbinates as in the case of the frontal and ethmoid sinuses, will frequently be sufficient to give relief. Occasionally, of course, the frontal sinus has to be opened externally before drainage can be established. Acute sphenoidal blocking may necessitate removal of the whole, or part, of the middle turbinate to facilitate the approach to the face of the sphenoid, unless drainage can be established by shrinkage of the membrane. Iodin vapor insufflation has recently been advocated for acute maxillary sinusitis.

In chronic sinus disease the diagnosis is much more complex and treatment much more difficult. The public has heard so much about sinus disease that patients frequently consult the physician with diagnosis already made. Because of unsatisfactory sinus surgery, resorts like Tucson, Phoenix and

* Read before the Eye, Ear, Nose and Throat Section of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

Palm Springs are Meccas for the sinus disease sufferer. What warm, dry air does for the sinus sufferer is too well known to need comment.

OPERATIVE TREATMENT

The operative treatment of sinus disease and the results of surgical intervention have been very unsatisfactory because of the incompleteness of the surgical procedures and unfamiliarity with underlying pathology. Allergic sensitization is often the beginning of nasal obstruction and the consequent blocking of the sinuses. Frequently these symptoms will simulate sinus infection. Intumescence of the nasal mucous membrane is communicated to the sinuses, and the flow of mucous increased and the blocking of the normal openings will interfere with the ingress of air. Repeat this condition frequently from infancy into adult life and a hyperplastic or purulent sinusitis is grafted on the allergic sensitivity. That many individuals sensitive to food and pollen have been operated on for sinus disease is too well known, and no relief was found until the causative factor in diet or surroundings was removed. If there be any doubt at all, all modern methods dealing with allergic symptoms must be exploited.

RADIOGRAPHY OF THE SINUSES

Radiography of the sinuses has greatly advanced in recent years. Hyperplastic membrane in the sinuses, particularly in the maxillary antra, can easily be demonstrated and fluid levels can also be determined. The use of iodized oil by injection into the sinuses, or displacement of air and radiography should also have a place in the diagnostic technique.

Frequently the lining membrane of the sinuses will have gone through the different stages into atrophy and finally will show, on examination, normal transmission of light and a negative radiograph. The cell count of Sewall is very valuable in these cases. In the study of lateral stereoscopic films the question of clarity of the ethmoid cells, whether sclerotic or atrophied, is attempted. In the sphenoid sinuses whether the walls show thickened membrane, sclerosis or atrophy of bone of the walls. In the oblique, projection through the orbit one ethmoidal group is uncovered from the other to show clouding of individual cells or bone changes.

Renewed emphasis is justly being placed on films of the base of the skull, taken in the vertical position, centering below the chin. Properly taken films in this position will show unusually clear detail of the posterior ethmoid cells and the sphenoid sinuses without any overlying structures.

DEVELOPMENT OF SURGICAL PROCEDURES

The surgery of the sinuses has undergone many modifications in the last decade. The use of local anesthetics has made the approach much more satisfactory. Temporizing with a chronic sinus condition has proved futile and radical or complete sinus operations must be considered the only means we have at hand for an attempted cure of sinus infection. All these measures have been

adopted only after careful study of former unsuccessful operative work. To lay down definite rules of operative indications is absolutely impossible. Each case must be dealt with as an entity. Repeated failures of cure of chronic sinus disease are frequently interpreted as indicating improper diagnosis.

Patients have developed an aversion to the word "radical" as applied to sinus operations. I agree with Ferris Smith that the expression should not be used. A "complete" sinus operation sounds much more satisfactory and not so alarming, and the patient usually agrees that the operation should be "complete."

The preturbinate route to the maxillary sinus is preferred by many surgeons, and is successful only if free drainage is established and all diseased membrane removed. This can only be accomplished when the whole of the maxillary sinus cavity is visible. The Caldwell-Luc technique is, perhaps, used more extensively than the preturbinate route because of easy access and clear vision of the interior of the sinus. The dangers of loss of sensation of the teeth in the region of the incision and injury to the infraorbital nerve must be considered. The vertical, instead of the horizontal incision has been advocated to obviate this injury to the dental nerves. Here again, free ventilation and drainage must be established, and all the lining membrane must be removed. There must be nothing in the nasal passage to obstruct drainage or ventilation, and portions of the middle and inferior turbinate bodies must be removed if indicated. It will be unnecessary for me to enlarge on the regeneration of mucous membrane in the operated sinus. The results of intranasal surgery on the ethmoid labyrinth have long been unsatisfactory and fraught with danger. It is impossible to visualize the remote cells comprising this complex sinus, and unless aided by direct vision, these cells cannot be drained or destroyed. The different operations evolved for the exenteration intranasally of the ethmoid labyrinth all fall short of the complete removal of all these membranes. The external operation is becoming more popular in the hands of operators. Sewall's technique, for tying the ethmoidal arteries, renders the operation practically bloodless, and, with good illumination and a knowledge of the anatomy, all the diseased cells can be destroyed and the lining membrane removed. The approach to the sphenoid sinus is also facilitated by this technique, and with experience, the sphenopalatine artery can be ligated before the face of the sphenoid is broken down and the lining removed.

The intranasal approach to the frontal sinus is distinctly hazardous. Any blind approach is non-surgical. The technique of Halle is certainly dangerous, and the different rasp operations are only temporary measures. The external route, as outlined by Lynch and later by Sewall, is comparatively easy and nonmutilating. The technique has been improved upon in minor details, and has proved successful in many hundreds of cases.

The treatment of chronic sinus disease is successful only when "complete" operative measures

are used, which means free drainage, thorough ventilation and a method of approach which enables the surgeon to visualize the entire limits of the sinus cavity so that all diseased membrane can be removed.

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DISCUSSION

ROBERT C. MARTIN, M. D. (384 Post Street, San Francisco).—Doctor Wessels has taken a common-sense viewpoint in his paper, which is a difficult one to present because of the amount of ground covered.

This word of caution as to recognizing and being surgically conservative in regard to allergic noses is timely. It is failure to recognize these that has resulted in the bad repute into which nasal surgery has fallen.

It is true that any nasal surgery, to be successful, must be thorough, and in some cases responding poorly to intranasal procedures, the external operation on the ethnoids is indicated. There is often disappointment as to results on the frontal, if the Sewall technique is followed. We believe that antrotomies alone in dentally infected antra are efficient, if the cases are not of too long standing.

Doctor Wessels has brought out the fact that we are not primarily treating a nose but a patient, a truth sometimes lost sight of.



CHESTER H. BOWERS, M. D. (1136 West Sixth Street, Los Angeles).—Doctor Wessels has brought the sinus problem up to date for us. In regard to the acute cases, I should like to particularly emphasize the point that the cloudiness to transillumination is due, not to pus, but to membranous edema. Many coryzas have acute antral symptoms with dark antra, but clear up readily with shrinkage alone and without purulent discharge. We should not be too hasty in shrinking acute antras, but should first treat nasal disease locally and employ measures directed toward the general condition for several days. Operative failure in chronic cases has been largely due to too hasty surgery and insufficient study, with resultant incorrect diagnoses. In most cases general care, along with conservative therapy, should be given a fair trial before resorting to surgery. In ethmoidal and sphenoidal diseases the Proetz treatment should be instituted before any operative procedures are advised. When surgery is indicated, I believe, with Goodyear, that our tendency should be toward conservative surgery of restoring breathing space, allowing ventilation and establishing drainage. If this is done, fewer "complete" operations will be found necessary. Finally, may I stress the great importance of two things: first, histopathologic and bacteriologic study of our cases and, second, the close relationship existing between sinus disorders, diet allergy, and the endocrines.



REA ASHLEY, M. D. (384 Post Street, San Francisco). Doctor Wessels mentions several points which, to me, are very important and merit emphasis: They are:

1. After reasonable local medical measures have failed and surgery is necessary, the surgical procedure should be complete enough to correct the underlying pathologic condition.

2. The rhinologist must be constantly on the watch for allergically sensitive noses, and operate them only after other methods fail.

3. The radiologists have improved their technique in making radiograms to the point where good x-rays are invaluable in making the diagnosis of sinus disease.

4. Dry climate certainly benefits many patients where surgery fails.

5. Finally, the treatment of chronic sinus disease is successful only when complete operative measures are used, and by this is meant free drainage and thorough ventilation.

THE LURE OF MEDICAL HISTORY*

FIFTY YEARS OF PROGRESS IN THE PREVENTION OF DISEASE†

By J. C. GEIGER, M. D.
San Francisco

III‡

TYPHOID FEVER

TO immunize against the several diseases means their almost certain elimination. The lowering of the mortality of diphtheria presents one of the interesting chapters on the value of research in the discovery and the use of antitoxin. Another outstanding achievement is the control of typhoid fever, now so infrequently seen that it may be considered uncommon and even rare; but a few years ago it was one of the commonest "fevers." Early in this century major cities of the United States and other countries expected and experienced periodic outbreaks of the disease, but today medical educators have no little difficulty in obtaining cases of typhoid fever for class demonstration purposes.

Certain communicable diseases show more or less regular cycles of incidence. This has been well demonstrated in measles, influenza, poliomyelitis, and other diseases. It is believed by many that this may be true in tuberculosis, but that the cycle is of a longer period. In typhoid fever, while there may be minor cycles, there has been a steady and progressive decline in the incidence. Outbreaks occur, however, in spite of the fact that the epidemiology of the disease is clearly understood and in spite of the brilliant record made. This would indicate either that there are other avenues of transmission as yet unknown, or that the application of measures demonstrated to be effective is not rigorously carried out. The latter explanation is obviously correct: we do not place in full operation the available control measures.

The experience in the armed forces of the United States and of the other great nations clearly demonstrates what can be done in controlling typhoid fever. The incidence in the army during the World War was so low that the Surgeon-General's report stated that "typhoid and paratyphoid fevers are of minor importance." In a group of 1,900,000 men, there were fewer than 900 cases of typhoid fever, an incidence of less than one-half per thousand. This is an enviable record, especially when one considers the incidence during earlier years. The Russo-Japanese War, with the rigid application of modern sanita-

* A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of CALIFORNIA AND WESTERN MEDICINE. The column is one of the regular features of the Miscellany Department of CALIFORNIA AND WESTERN MEDICINE, and its page number will be found on the front cover index.

† One of a series of public lectures by invited speakers, conducted by the Stanford University School of Medicine. From the Department of Public Health, San Francisco.

‡ Part I of this paper was printed in CALIFORNIA AND WESTERN MEDICINE, November number, page 327; Part II, December number, page 406.

tion and immunization methods by the Japanese and the relative lack of such measures in the opposing Russian forces, showed conclusively the value of control measures. The morbidity and mortality rates were markedly higher in the latter group.

In contrast with these demonstrations in military groups, there are but few instances on record of such a program applied to a civil population. The eradication of the disease will be possible only when there is placed in operation a plan which shall include some of the features of the military program. Sanitary engineering has protected the water supplies of cities willing to pay for such service. Efficient health officials safeguard the milk supply through dairy inspection, pasteurization, and milk-handler examination. Attempts are made to follow the carriers of *B. typhosus*, but this presents many difficulties. Immunization against the disease is offered and encouraged, but this advantage is not accepted as readily as it should be.

Typhoid fever is a preventable disease. Its continued presence is a challenge to the conscientious health official. The public must be informed of the necessity of protection by vaccination, if they will persist in drinking from open streams of "clear, cold mountain waters," which very frequently are polluted by deposits of human excreta, and if they continue to frequent beaches upon which is turned untreated or raw sewage. The program, in addition, should include the search for bacillus carriers, particularly in food handlers, and the follow-up of all known carriers at regular intervals. It is essential, of course, that the active case of typhoid fever be isolated, and that the bodily discharges be effectively disinfected. The justification for quarantine in typhoid fever, however, is questioned. There is no valid reason why a case of typhoid fever may not be cared for in the open general ward if certain simple measures are carefully executed.

Typhoid fever will continue to exist, probably, unless the contributions of modern sanitary science are thoroughly utilized. The time has passed when we can carelessly dispose of sewage and other devastating wastes by turning them into the nearest lake, stream, or bay. Man wants a protected water supply, yet he frequently disregards all consideration for his neighbor and even pollutes his own supply. Modern methods of sewage disposal and water purification are not prohibitive in their cost, and conditions demand that such installations be made everywhere in the not too distant future.

DIPHTHERIA

Diphtheria is a specific infectious disease caused by a rod-shaped organism called the Klebs-Loeffler bacillus. The site of the disease is usually in the nose, throat, or larynx, the constitutional symptoms being caused by a toxin liberated by the growing germ. The disease is spread by direct contact with people who have the disease, or with carriers—people who harbor the organism in the nose and throat, and yet are immune to the disease.

Owing to the liberation of the soluble toxin, the disease may be controlled in the patient by the early administration of antitoxin. The usual rules for isolation of the patient are in force just as in scarlet fever.

Children need not have diphtheria. It can be prevented by a simple harmless treatment with toxin-antitoxin or toxoid. In contrast with scarlet fever, no disease lends itself to a prevention program like diphtheria. Since the introduction of vaccination against smallpox, no form of active immunization against a communicable disease in the civil population has received such widespread acceptance by the public, and such general endorsement of the medical profession, as toxin-antitoxin immunization against diphtheria.

In a study of over one hundred of the larger American cities, Armstrong and Walker found that nearly all are doing some toxin-antitoxin immunization among school and preschool children, mostly, however, among children of school age. Only five cities had secured immunization of 25 per cent of the school children. So generally accepted has toxin-antitoxin become that the appraisal form of the American Public Health Association gives full credit for diphtheria control only to cities which have secured immunization of at least 25 per cent of their preschool population.

In San Francisco toxin-antitoxin immunization was begun in 1925. Since that time, 22,714 children of preschool and school ages have completed immunization. Practically all of the work has been done in the public and parochial schools in the kindergarten and first grade. Immunization is offered to San Francisco children of preschool age in the nine infant welfare stations of the Department of Health.

One of the striking features in San Francisco mortality and morbidity statistics of the past few years is the remarkable decline in morbidity and mortality in diphtheria. From 1,725 reported cases with 116 deaths in 1924, the number has decreased to 144 reported cases with five deaths in 1931. A similar decline in diphtheria has occurred in a number of large American cities during this period, and in New York City the Health Department has attributed it to toxin-antitoxin immunization of school children. The reported San Francisco cases and deaths from diphtheria, together with the number of individuals immunized, have been tabulated as follows:

Year	Cases of Diphtheria	Deaths	Immunization
1921.....	1710	141	.....
1922.....	1517	119	.....
1923.....	1708	148	.....
1924.....	1725	116	.....
1925.....	623	37	1605
1926.....	612	31	1110
1927.....	572	21	5277
1928.....	415	20	1049
1929.....	360	17	3600
1930.....	264	14	3606
1931.....	144	5	6457

The fact that as rapid a decline in diphtheria mortality in the various age groups occurred in San Francisco, as in many cities that attributed a similar decline to toxin-antitoxin immunization,

should make us critical of unanalyzed figures on the causative relation of that procedure to the falling diphtheria mortality.

Although San Francisco figures are not available to indicate the value of toxin-antitoxin, there is ample evidence of its efficacy where immunization has been extended to a considerable proportion of the population. In Auburn, New York, a city of 36,000, where 85 per cent of the school children have been immunized, Sears reports that in the past three years cases have been reduced from about eighty-five to five per year, and deaths from fifteen to one, and that one a questionable diphtheria case.

An intensive study of some 8,000 children immunized in Providence shows that approximately 90 per cent of the children who received three injections of toxin-antitoxin were subsequently protected against diphtheria. As few of these children were retested (Schick), it is probable that such cases as did occur were in children who failed to acquire immunity in one course of injections. Among 15,000 children immunized or naturally Schick-negative, the prevalence of diphtheria has been only one-tenth of the rate in the same group of the rest of the population.

If toxin-antitoxin is to play any important part in the control of diphtheria, it is self-evident that a considerable proportion of the children in the more susceptible age groups must be immunized. The ideal procedure would include immunization of the preschool group, say, from one to four years. Immunization at this time would carry the child over the period of highest fatality and greatest susceptibility to diphtheria. On account of the administrative difficulty in reaching children of this age, it is questionable whether large cities will be able to secure immunization of a sufficient proportion of this population to control diphtheria. Immunization of pupils in the kindergarten and first grade leaves unprotected the children at the ages in which the highest case fatality from diphtheria occurs; but, from the administrative standpoint, it is probably the most practical scheme.

If any considerable proportion of the school children are immunized, there is also a definite reduction in the exposure in the home of younger children who are themselves less liable to come in contact with cases. No one has yet shown just what proportion of the population needs to be immunized to prevent any serious spread of a disease of low infectivity such as diphtheria, but it can be seen off-hand how rapidly the increase of immunes decreases the opportunity for effective contact between susceptibles.

Although there is no evidence that toxin-antitoxin has been an important factor in the marked decline of diphtheria in San Francisco and elsewhere for the past six years, there is every reason to believe that if immunization is extended to a considerable proportion of the children in the most susceptible age groups, it can be more definitely the deciding factor in the ultimate control of diphtheria.

(To be continued)

CLINICAL NOTES AND CASE REPORTS

SOLID TERATOMA OF OVARY

By R. W. BINKLEY, M. D.
Selma

IN going over the literature on teratomata of the ovary, one is at once impressed by the lack of uniformity in classification of these growths, and also the admission, by practically all writers, of the inadequacy of the present classification.

By most of the writers, for example, they are divided into cystic teratomata and solid teratomata, both forms being called teratomata owing to the fact that the histogenesis of the two is apparently the same. Then, in speaking of this growth, one must qualify the type to which reference is made, since, from a clinical standpoint, they are vastly different.

Because most of us are familiar with the term "dermoid cyst, and with the growth itself, it seems that a clearer classification is that of Lynch, who on account of their common origin, classifies them as embryomata (a term which in itself gives a clue to the origin) and then subdivides embryomata into (a) dermoid cysts and (b) teratomata. With this classification, one must not confuse the ovarian dermoid, or cystic teratoma, with the true dermoid of ectodermal cell inclusions along the lines of embryonic fusion. Both types of embryomata are potentially tridermal, though at times all three layers may not be demonstrable, and the essential difference histologically is in the age of their embryonic cells.

The dermoid has progressed in a more orderly way toward the formation of definite organs, though very imperfect; while the teratoma has advanced too rapidly to develop a definite pattern, and is composed of a jumbled mass of embryonic cells with little attempt at organ formation. Askanazy proposes the name "teratoma embryonale" for the solid ones, and "teratoma adultum" for the dermoid cysts.

The histogenesis of these two types of growth is still conjecture, and neither of the two advanced theories, nor a combination of the two, will as yet serve without criticism.

The blastomere theory of Marchand and Bonnet is favored by some writers as adhering more closely to nature's fundamental principles; but by this theory it is difficult to explain authentic cases of ten dermoids in one ovary, and eleven in another. The multiple origin of ovarian dermoids is best explained by the germ cell theory of Wilms; but this theory, too, fails in explaining such growths as occasionally occur remote from the ovary.

It is evident that if they have their beginning early enough, the cells from which they arise are totipotent and capable of giving rise to ectoderm, entoderm, and mesoderm.

Admitting a common origin of all embryomata, from a clinician's viewpoint, they are widely dif-



Fig 1.—Photograph of the original tumor sectioned.

ferent. The dermoid is one of the commonest ovarian neoplasms encountered, constituting, in various estimates of literature, from 5 to 15 per cent of all ovarian tumors; and the casual operator is familiar with their gross pathology and clinical history, their course being essentially benign.

The case I wish to present is one of teratoma, often spoken of as solid teratoma, and one which invariably gives a different clinical picture. It is a very rare condition by comparison, literature giving us less than one hundred cases in all. There was no record of a case in the Bellevue Hospital up to 1925, though their gynecologic cases averaged eighteen hundred per year.

It is attended by a grave prognosis, the mortality being generally estimated at from 80 to 97 per cent. Frank collected a series of thirty-seven cases, with a mortality of 97.2 per cent. Pfannenstiel found a mortality of 86.8 per cent in a series of thirty-two cases. Geist gives a mortality of 85 per cent. Harris reports a patient well after ten years who was operated upon at the age of five years and ten months, and who at that age had developed premature puberty and precocious somatic development. The growth from this patient showed definite malignant changes. The operation consisted of removing the involved ovary and tube; the normal ovary and tube of the other side, together with the uterus, being left intact.

The surgical procedure in these cases depends upon the surgical judgment of the operator, and the limited experience of others; but a complete removal of the involved side intact is imperative, as puncturing or rupturing of the growth will lead to implantations. In the case of dermoids of the ovary, the procedure may be more conservative, especially during the child-bearing age.

REPORT OF CASE

The patient, a girl thirteen years of age, was first seen on October 8, 1929, complaining of a "sideache" which had occurred at intervals for the past two months. The pain was generally in the right side, but occasionally felt in the left groin. It was always

worse after exercise, and had led her to be excused from physical education work at school. Never severe enough, however, to cause her to miss school until on date of examination, at which time it was worse and was accompanied by diarrhea. She has had several attacks of diarrhea in the past two months, alternating with constipation.

Family History.—American, above average, intellectually and socially. Father, L and W, at 37. Mother, L and W, at 37. Two brothers, L and W, 9 and 6 years. Two sisters, L and W, 15 and 4 years.

Personal History.—Full term, normal delivery, birth weight eight pounds. Breast fed three months, and then on Eagle brand milk. Developed satisfactorily except nervous and restless. Always rather thin, but this was a family characteristic. No sickness in past, except measles. Frequent so-called "leg aches" since age of five. Above average in school. Has not started menstruating.

Physical Examination.—Well developed, fairly nourished, blond girl, who entered office walking and not giving evidence of any marked discomfort. Height, 58 inches. Weight, 86 pounds. Head, neck, eyes, ears, nose and throat essentially negative. Breasts normal for age. Heart and lungs negative except for some tachycardia, due probably to nervousness. Temperature and blood pressure, normal. Extremities and reflexes normal.

Abdomen: Patient recumbent gave appearance of a four months' pregnancy. A tumor mass was felt in the midline extending up to the umbilicus. Felt solid and smooth throughout. No fluid demonstrable in abdomen. Rectal showed pelvis filled with solid tumor mass, separate from uterus.

Diagnosis.—Tumor of right ovary. Surgery advised.

Subsequent History.—On the evening of October 11, three days after initial examination, she developed more severe pain in right side and was quite tender in R. L. Q. Urine: 1019, albumin 0, sugar 0. Microscopic negative. Blood count: Hemoglobin 70, red blood cells 4,200,000, white blood cells 18,000. Differential, not done.



Fig. 2.—Photograph of one-half of one of the secondary tumors.

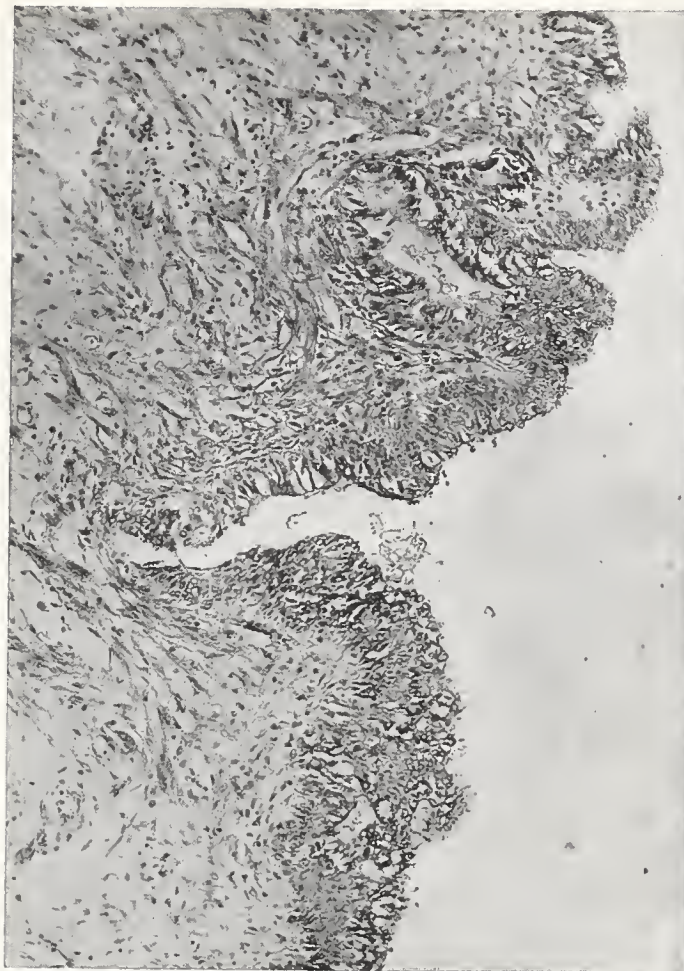


Fig. 3.—Section of original tumor.

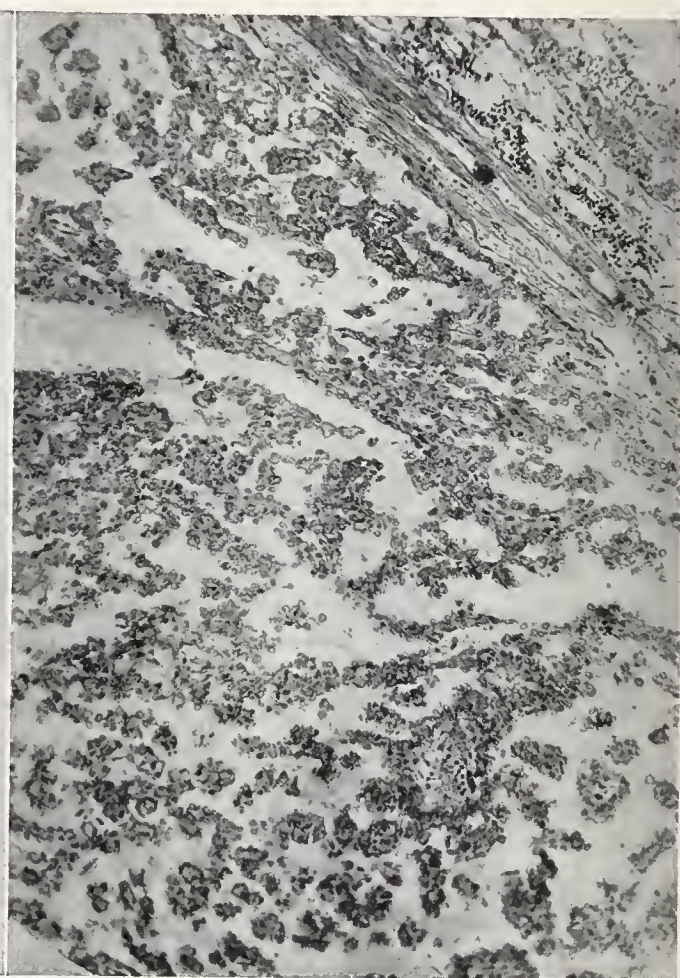


Fig. 4.—Photomicrograph of secondary tumor, showing an adenocarcinomatous arrangement. The picture was quite uniform throughout.

Operation.—On October 12, midline, suprapubic incision, under gas and ether anesthesia. Upon entering abdomen, free, straw-colored fluid was encountered and a tumor mass was seen to fill abdomen to above the umbilicus, and was covered by adherent omentum. Upon freeing the omentum, the lower abdomen contained bloody fluid, though no bleeding points were encountered. The omental adhesions were fibrinous, and easily freed by the gloved finger.

Further examination showed a twisted pedicle to the tumor, with one complete turn of the pedicle and the distal end of the right tube. There were two distinct parts to the tumor, separated by a slight constriction: the upper or abdominal part was cystic and the wall was transparent in places; the lower or pelvic part had to be separated, it being adherent in the cul-de-sac. The mass was removed, together with the right tube en masse.

Gross Pathology.—Tumor mass, 14 centimeters in length and 8 centimeters in diameter, separated into two rather distinct parts by a constriction, as shown in figure. The proximal part is solid in consistency, and has tube attached and the remains of pedicle. This part is edematous on surface and suggests the beginning of gangrene. The distal part is cystic, being smooth and translucent, except at points where fibrinous adhesions had left their mark and points where the wall was transparent. It contained a rather thin fluid with many floating particles that could be seen through the transparent portions. Tumor was fixed without opening.

Microscopic Pathology.—Sections taken through solid portion. The sections show a very curious picture. There is no recognizable ovarian tissue present. The stroma is made up of an embryonic type of apparently actively growing connective tissue, giving it a pale appearance. Throughout the stroma are glandular spaces, which vary markedly in size and shape. Many of the glands contain a homogeneous pink staining material; some of the glands, particularly the larger

ones, are lined by an epithelium which resembles squamous epithelium. The upper layers are very much flattened, and are present as fibrillar material, pink-staining and without nuclei. Other spaces are lined by a columnar epithelium of a mucoid variety; still others by cells resembling those of the upper respiratory tract. There are small aggregations of the squamous cells described, here and there, and a number of rudimentary hair follicles, as well as sebaceous and sudoriferous glands. In addition, one sees several oval bodies showing the structure of cartilage. Other bits of tissue resemble muscle, though practically no nuclear elements are seen, and there are also several areas which resemble cross-sections of nerve fibers.

A number of groups of small darkly staining cells show no definite structural arrangement; these betray a number of mitoses, and resemble somewhat the embryomata of the kidney, according to Doctor Connor. He feels that the tumor has definite malignant tendencies, and suggests very close observation of the patient, although if the tumor were free and completely removed it might carry a favorable prognosis.

Diagnosis: Teratoma of ovary. Dr. D. E. Morton.

Subsequent History.—Patient made an uneventful recovery, wound healing per primum and sutures removed on October 22, 1929.

Patient was requested to report at monthly intervals, but failed to do so and was lost track of until June 23, 1930, practically eight months later, when she was brought in because of her inability to control her urine. She complained of no pain, but stated that when she sneezed or coughed, or moved suddenly, she lost some urine. Examination at that time showed a huge abdominal tumor, giving appearance of a seven months' pregnancy. The tumor was lobulated and felt solid, and there seemed to be a separate mass in the left lower quadrant. Rectal showed pelvis filled with mass that was continuous with abdominal portion.

On June 24 she was unable to void urine, and required catheterization. The family was opposed to further surgery, so it was decided to try x-ray treatment; although in literature I could find record of only one case having been treated with x-rays. That case was reported by Dr. Edw. A. Bjorkenheim in *Acta Obstetrica et Gynecologica Scandinavica*, and then the x-ray treatments proved of no value. The patient was turned over to a competent roentgenologist on July 1, and at that time treatments were started.

On July 16 she was again operated upon, through a midline incision, under gas and ether anesthesia.

Upon entering the abdomen, three distinct and separate tumors were found. The one previously felt in the left lower quadrant was an omental implant, the size of two fists—glistening, grayish white in color, smooth and almost solid, but with some cystic points that bulged slightly. The next was retroperitoneal, laying slightly more to the right of midline, at the level of umbilicus, and adherent firmly to several loops of intestine. This one had several areas, rather darkly pigmented, and more cystic in character. The third one was wedged tightly in the pelvis, and extended up into the abdomen, more on the left.

Complete removal was impossible, so the omental transplant was removed for specimen, and the abdomen closed without drainage, extra stay sutures being used in anticipation of abdominal distention. The girl, however, made an uneventful recovery, and healed nicely.

Treatments by x-ray were again advised as a last resort, and the patient was once more referred to the roentgenologist.

The patient was not seen again until July 25, 1932, when the size of abdomen having decreased perceptibly, and her health having improved, she was able to return to school. She began to menstruate in November, 1931, and menstruated regularly for three months, and then skipped until May, 1932. When seen on July 25, 1932, she was complaining of pain in the right side, and examination showed the abdomen greatly distended by a huge lobulated tumor mass. The skin was tight and showed numerous striae, she was markedly anemic, and sick-looking.

By August 15, 1932, the pain was so severe and cramps in the right leg so intense, as to require morphin for relief. Her condition grew rapidly worse, until she expired at 6 p. m. on August 21, 1932.

Postmortem.—The parents would consent only to opening of the abdomen. Extremely emaciated young woman, with abdomen distended far beyond size of a full-term pregnancy. Frame appeared as a skeleton, with but slight covering. Abdomen was opened from xiphoid to symphysis, and the abdomen was filled by the two tumor masses described at the second operation. The intestines were all displaced to the flanks, and the omentum was contracted high, and was a contracted lace work of small, pearl-gray tumors, varying in size from pin point to a marble, most of them being about the size of a grain of wheat and up to that of a pea. The parietal peritoneum was studded by myriads of growths of the same character, so close together that there was not room to place a finger tip without touching one of these growths. The liver was filled with growths, the largest of which was the size of a walnut. The intestines were covered with similar implantations, but smaller, and the mesentery was filled with somewhat larger ones. Upon removing a part of the diaphragm, which was also involved, it was found that some of the growths had penetrated into the chest cavity to involve the pleura, and that the mediastinum was filled with the growths.

COMMENT

The two main growths were removed for study, and are shown in the accompanying figures, as were also portions of other organs which were removed for sections.

Their size is indicated by the yardstick, and they were both solid, grayish white in color, nodu-

lar in part, and covered with adhesions of surrounding viscera. A gross photograph of one of these tumors sectioned is shown. The microscopic sections show a rather uniform type of growth, that is, an adenocarcinoma; but this is not unusual, and is explained on the basis of carcinomatous change in certain of the epithelial elements of the teratoma, with subsequent metastases (which may also occur in the dermoid cyst). McCallum states, "While it is true that the teratoma itself is benign, it is not at all uncommon to find the development of a distinct carcinoma at some point in its epithelium, exactly as we find it in the body in general."

SUMMARY

1. A comprehensive classification of teratomata should be adopted.

2. The cystic and solid types have a common origin, and vary only in age of cells.

3. The prognosis in case of solid teratoma is grave; in case of cystic teratoma, or dermoid, the course is usually benign.

4. The cystic type is very common, while the solid type is extremely rare.

5. The histogenesis of ovarian teratomata is not yet satisfactorily explained by either the blastomere theory of Marchand and Bonnett, or the germ cell theory of Wilms.

6. The treatment in case of solid teratomata should be radical and with care.

Medical Building.

A SIMPLE DEVICE FOR USE IN THYROID SURGERY

By GEORGE A. JOHNSTONE, M. D.
Los Angeles

THE usual method of placing a patient upon the operating table for a thyroidectomy has a number of disadvantages both to the patient and the surgeon, as well as to the surgeon's assistants. For example, it is always desirable that the surgeon, when doing a thyroidectomy, should have as much exposure of the thyroid as possible by placing the patient in a position which will throw the thyroid closer to the surface of the neck. The usual method employed for obtaining this position is that of placing a sand-bag posteriorly to the cervical and upper thoracic regions of the patient; but while the purpose of this is to elevate the cervical and upper thoracic regions, it has proven very inefficient in several respects. The hardness and inflexibility of the sand-bag cause much distress to the patient. There is no way of adjusting the position of the patient for the convenience of the surgeon in opening and closing the wound without causing additional discomfort to the patient; and, furthermore, it is not possible to raise and lower that portion of the body involving surgery so as to give the correct elevation necessary to the most efficient work of the surgeon.

A sheet suspended by a frame for the purpose of separating the anesthetist's field from the field

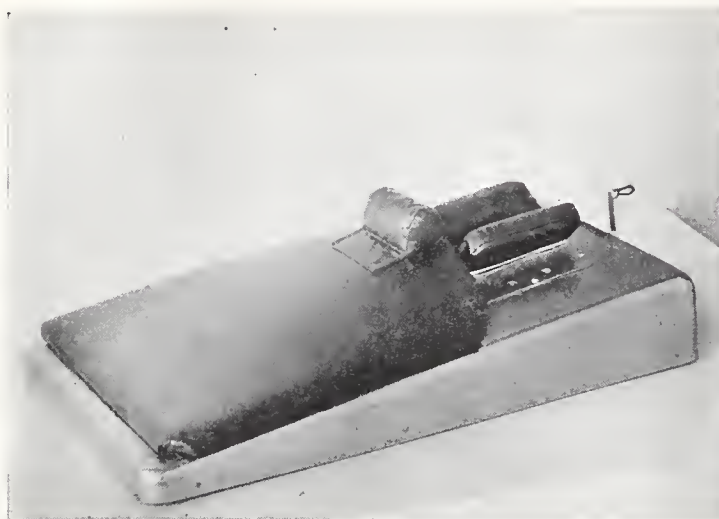


Fig. 1.—Showing operating table devised for use in thyroid surgery.



Fig. 2.—Showing use of the hood.

of surgery serves as a great handicap to the surgeon, since it is in the way of his elbow when he wishes to work from certain positions. It also limits the room of the assistants for their work.

ADVANTAGES OF THE TABLE

A device which will eliminate or minimize the discomfort to the patient, and give the surgeon and his assistants every possible advantage in doing a thyroidectomy, has been developed by the author, who suggests the following as chief advantages of his device:

Conformity to Shape of Patient.—First, it is constructed so that it will conform to the shape of each individual patient, regardless of size or form. The adjustable part is made of material which gives comfort, and yet is firm enough to keep the patient in a stable position.

Correct Elevation of Thyroid.—Second, the back rest can be mechanically raised or lowered by the simple turn of a crank (located at the head of the device) without any discomfort or inconvenience to the patient, thus making it possible to get a correct elevation of the upper thoracic and cervical region for each step of the operation. For example, when it is desired to throw the thyroid close to the surface of the neck, this can be done by raising the back rest. This rest is arranged so that the center is elevated, leaving the sides sloped for the dropping of the patient's shoulders, and the elevation of the part to be operated upon. Then, when relaxation of the tissues and muscles is required for suturing, the back rest can easily be lowered to the point where the most suitable position is desired.

Special Hood.—Third, a specially designed hood and frame make it possible for the surgeon and his assistants to work freely; for since the hood is shaped to fit over the head of the patient, the surgeon and his assistants are not hampered by the obstruction of a partition which would be in the way of their elbows while operating, and yet is sufficiently large to give ample room for the administration of an anesthetic. Because of the roominess of the hood, the patient has a feeling of perfect freedom in breathing; and this is a great advantage where only local anesthesia is

employed. The hood is especially designed to fit snugly under the chin and down the sides of the neck, with a skirt on each side sufficiently large to tuck under the patient's shoulders, thus giving a neat arrangement for keeping the field of operation absolutely sterile. It can be placed in the sterilizer without injury to the fabric, and will retain its original shape after sterilization.

Adjustability of the Head Rest.—Fourth, an adjustable head rest gives a comfortable position for a patient of any size, and assists in obtaining the desired position of the thyroid.

Adaptability to Any Operating Table.—Fifth, this device can be used on any type of operating table, simply by placing it in the correct position.

The base and hood frames are made of metal, attractively nickel-plated; and the back and head rests are neatly upholstered with a good quality of fabrikoid.

4019 Pico Street.

TREATMENT OF DIABETES INSIPIDUS

By HAMILTON H. ANDERSON, M. D.

AND

ALFRED C. REED, M. D.

San Francisco

VARIOUS theories have been suggested concerning the relation between the posterior pituitary lobe and water elimination. Published experimental findings indicate that the decrease in water elimination produced by injections of posterior pituitary extract is based either upon decreased filtration through the glomeruli or by increase of urine resorption in the tubules. While other authors have shown the latter to be true, Poulsson¹ has demonstrated experimentally that decreased diuresis is to be attributed to increased back-diffusion of urea into the renal tubules. This, he contends, explains the fact that urea concentration in the urine is below that normally expected according to decreased flow of urine. Pellegrini,² however, believes that in some cases of diabetes insipidus the capacity of the kidneys to furnish a concentrated urine is diminished,

while in others water diuresis is increased. Three of the four patients he studied eliminated urine low in sodium chlorid content. He concludes that posterior pituitary exerts an action on water exchange between the blood and tissues, and also on the secretion of urine. In cases where reduction of urinary secretion did not occur, there was no increase in specific gravity of urine. One other investigation of the pathogenesis of diabetes insipidus is significant. Crăciuneanu⁶ et al. in Bucharest found a marked difference in the water exchange in a patient with this disease compared with normal individuals. They state that abundant diuresis during experimental thirst was the only factor in favor of a disturbance in the process of elimination. These workers conclude that the disturbances in water exchange in diabetes insipidus are probably the consequence of a dysfunction of the kidneys and other tissues.

Whatever the cause of increased urinary output and thirst in these patients, the symptoms require immediate relief. Posterior pituitary solutions, while not curative, do give material benefit as long as either injections or intranasal applications are continued. The following case cites our experience with the use of this extract, combined with other adjuncts, during a five months' period of observation.

REPORT OF CASE

A man, aged 26, was referred to us on August 1, 1932. He had suffered a left sacroiliac strain eighteen months before, and had received physiotherapy and worn a brace until recently. Aching pains in the sacroiliac region, after effort, continued, however. Two months ago excessive thirst began and he drank about 1½ liters of water every hour because his stomach "burned." Diurnal frequency occurred every hour, and nycturia every two hours resulted in the output of 25 to 30 liters of urine during twenty-four hours. No change in appetite was noted and no craving for sweets complained of. He had lost 10 kilos in weight during the past month. No familial history of diabetes was known. His past history revealed the habits of a normal unmarried young man. The only disease remembered was influenza in 1918 and again in 1923. Venereal infection was denied. He had fractured his right ankle in 1923, and a tonsillectomy was performed in the same year. His systems were negative. Maximum weight in 1926 was 80 kilos, average was 74 kilos, and at present is 64 kilos. General examination was essentially negative except that he was under normal weight for his height (172 centimeters), had a blood pressure of 106/74, and was slightly dyspneic on effort. Laboratory findings revealed a normal blood count, negative Wassermann and Kahn reactions, a normal stool, and a basal metabolic rate of ± 0 per cent. Fasting blood sugar was 220 milligrams per cent when first seen, and ten days later dropped to 138.9 milligrams per cent. The first speci-

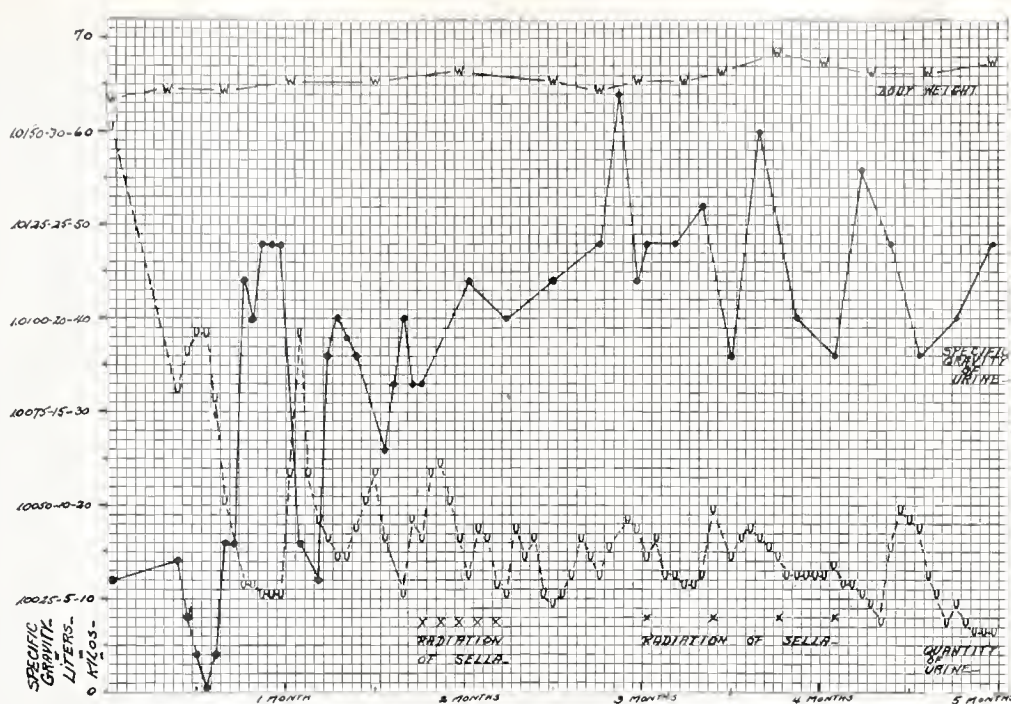


Chart 1.—Progress of patient under treatment for diabetes insipidus.

men of urine was clear, pale straw-colored, acid reaction, and the specific gravity was 1.003. Tests for albumin, sugar, acetone and diacetic acid were negative. The sediment was normal except for a few small clumps of bacteria. Roentgenologic examination of the sella tursica revealed that it was small and apparently completely bridged on the left side. There was no evidence of fracture, bony injury, or tumor.

Treatment consisted of giving the patient a low carbohydrate diet, administration of posterior pituitary by various routes, together with other adjuncts, with the results noted in Table 1. Pituitary extract orally did not decrease urine excretion, nor did local applications of pitressin to the nasal mucosa. A maintenance daily dose of one cubic centimeter of pituitary extract (twenty international units hypodermically) was required to give symptomatic relief. Toward the end of the second month of treatment, radiation of the sella was tried in an effort to further reduce water elimination. Five doses were given over a ten-day period with a satisfactory response, as noted in the table. A month later four more exposures (total of 3000 r on the right and 1500 r on the left) were made at ten-day intervals to the end of the fourth month, with a drop in urine output to four liters in twenty-four hours. At this time massage of the lumbar muscles was instituted, and the pelvic tilt was corrected by placing a lift under one heel. When last seen professionally the patient was excreting three liters daily and was symptom-free.

The specific gravity of the urine during our observation varied more or less inversely proportional to the quantity excreted. At the onset the specific gravity was from 1.000 to 1.003, and the urine output 20 to 30 liters daily. Marked fluctuation of specific gravity was noted during the treatment period, but at the end a rise to 1.012 occurred, while the urine excretion was reduced to about three liters. A slight increase in weight occurred.

Variations in blood pressure were noted with a gradual increase to normal (124/74) when last seen.

SUMMARY

Although the mechanism of action of posterior pituitary substance in decreasing water elimination in diabetes insipidus is not known, definite decrease in urinary output occurs when the extract is given hypodermically in this disease. The specific gravity of the urine is roughly inversely proportional to the amount excreted. One cubic

centimeter of the extract (twenty international units) was required daily to render a patient symptom-free. The adjuncts, *i. e.*, radiation of the sella tursica (even in the absence of tumor) and physiotherapy, were resorted to in the case reported. Our observations confirm those of Faelli,⁴ who found roentgen exposures of the hypophyseal region combined with posterior pituitary therapy more effective than exclusive treatment with pituitary alone.

350 Post Street.

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UNUSUAL EMBRYONAL DEVELOPMENT ERROR*

By W. A. SHAW, M. D.
Reno, Nevada

CERTAIN congenital deformities are more or less commonly seen in living infants, as club-foot, harelip and cleft palate, branchial cysts or fistulae, spina bifida and meningoceles, malformations of the genital and urinary tracts, as well as maldevelopments of the alimentary canal, imperforate anus, pyloric stenosis, and nonformation of various segments, and the like. Many more errors in development of the embryo are found in the dead fetus, such as absence of extremities, and monstrosities of various kinds.

The case I am presenting is apparently an error in development in one of the lower embryonal buds. According to anatomical authority¹ in embryology, the lower-limb buds commence as anterior and posterior folds at the lower end, or tail, of the embryo for the formation of the thigh and leg at about the third week of intra-uterine life. These folds and the forming limb bud should be approximately the same size on each side. The development of this part of the body occurs later than that of the upper portions of the body.

REPORT OF CASE

A baby girl, at present five months old, after an instrumental delivery at the hospital was found by the mother, upon the arrival of both at home, to have an inequality in the size and contour of the lower extremities. The baby was brought to me when about two months old. There was nothing unusual about the infant at this time except an apparent exophthalmos (which was found to be a family characteristic), a condition of protein and mineral deficiency in the diet, and an easily discernible difference in the lower limbs. Both limbs were apparently normal in development as regards bone and soft tissue structure. There was no evidence of lymph block, or of interference with the circulation anywhere suggestive of pseudo-elephantiasis or hyperplasia due to increased nutrition and stimulation of the affected area. The right lower part,

* Read before the thirtieth annual session of the Nevada State Medical Association, Las Vegas, September 29, 1933.



Fig. 1.—Showing asymmetry of extremities.

from the lumbar region down, was uniformly larger than the left, buttock, hip, labia, thigh, and leg. Measurements to contrast the limbs were taken as accurately as possible, and were as follows:

- Left anterior spine superior to tip of fibula, 6 7/8 inches.
- Right, 7 1/4 inches.
- Left mid-thigh diameter, 4 15/16 inches.
- Right, 5 7/16 inches.
- Left calf, mid-diameter, 3 3/4 inches.
- Right, 4 3/16 inches.

Figure 1 clearly shows the asymmetry in the limbs, both bone and soft parts; and there seems to be a difference in the size of the ilia as well.

The family history is essentially negative as to malformations or deformities in the past; there is a questionable history of tuberculosis in a maternal grandparent, while the parents of this child are both exceptionally well-developed, physically and mentally, and two sisters of the baby are strong healthy girls, with well-developed, sound bodies.

In the baby, the head, upper extremities, and other parts of the body seem to match with the left leg; the right lower part being definitely an error in development.

COMMENT

Many theories as to the etiology of such a condition may be drawn, such as endocrine unbalance, which does not seem probable when only one limb bud is involved. Circulatory nutritional disturbance, due to anomalous blood vessels, seems ruled out by the height of the disproportion, as well as the definite bone difference. It seems to be an original difference in the cells of the group forming the folds of the limb bud, or a difference in the reaction in the group to the cell growth-stimulating agency, whatever that may be.

It is reported that such errors in development sometimes affect one whole side of the body, one extremity, upper or lower, but, more usually, one lower extremity. I have been fortunate in seeing several such cases in this country and abroad. These individuals grow up and live normal lives without serious inconvenience, except from an esthetic standpoint. The difference in the length of the lower limbs is taken care of by pivoting and rotation in the hips, or by a built-up shoe on the shorter side. Usually the difference in the extremities is hardly noticeable when the parts are covered by ordinary clothing.

The treatment in the case presented has been improvement in general condition by supplementary feedings, increase in vitamin and mineral intake, and exposure to sunlight and the like, with excellent results; while the only treatment thus far instituted for the asymmetry in the limbs has been massage and exercise in the smaller portions, in so far as is possible in so small a child, while keeping the larger parts as quiet as possible. This treatment has been faithfully carried out by the mother with my help, and at present there seems to be some diminution in the asymmetry—in appearance at least. Later on, treatment by further stimulating the growth of the smaller limb is contemplated, by increased exercise, hyperemia, and electrical stimulation. In the future, if necessary or desired, one of the methods of increasing the length of long bones may be used, such as bone graft in the shorter femur; or by increasing bone growth through interference with the circulation in the metaphyses of the shorter femur and tibia by section through the medullary cavity according to the method recently described by Ferguson² in *The Journal of the American Medical Association*. I have been unable to find reports as to the results of treatment in such cases in the current literature.

A further report regarding this peculiar developmental error will be given after sufficient time has elapsed to deduce the value of various procedures.

Medico-Dental Building.

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Red Cross and Unemployment Relief.—More than two-thirds of the nation-wide system of Red Cross chapters and branches are today participating in unemployment relief. These include such activities as garment production and distribution, provision of hot school lunches and milk for needy children, family welfare work, aiding veterans of the World War and transients, promoting food conservation by canning the surplus products. The Red Cross has accommodated itself to the unusual needs of the times by extending its sphere of helpfulness and multiplying its deeds of mercy. The memberships of the American people, subscribed at the annual roll call, from Armistice Day to Thanksgiving, make possible this augmented service.

RUPTURED VENTRAL HERNIA

By H. M. GINSBURG, M. D.
Fresno

REPORT OF CASE

H. S., female, aged 47 years, was admitted to the General Hospital of Fresno County at 12:30 a. m., September 30, 1931. Patient did not speak English, and only the following history was obtained. A laparotomy was performed in 1929, following which there was a weakness in the abdominal wall at the site of the incision. About 3 p. m., September 29, 1931, while working in the grape fields, the patient felt a sudden "give" in her lower abdomen. Upon inspection she noted coils of intestines protruding from the skin. After consulting a physician she was brought to the hospital, a distance of forty-five miles. Upon her arrival, at 12:30 a. m., an examination revealed a well-developed, well-built female in marked pain, with about thirty inches of small intestines protruding through the skin and strangulated at the base. The intestines were black and dry.

Under ether anesthesia the skin, fascia, and peritoneum were incised and the strangulation freed. Using the aseptic technique, an end-to-end anastomosis was performed after removing about thirty-six inches of ileum. The excess peritoneum forming the hernial sac was removed, the abdomen was drained, and the peritoneum closed. The fascia was cleaned and overlapped with no apparent tension. Silkworm-gut sutures were used as retention sutures, and for the closure of the skin after the excess had been removed.

The patient was in shock immediately postoperative, with a temperature of 97 degrees centigrade and a pulse of about 78. Subcutaneous glucose, 5 per cent, and stimulants were given, and the patient was treated for shock. After twenty-four hours the patient's temperature was 101 degrees centigrade, but she required no narcotics, was voiding frequently in small amounts, and had a bowel movement—in all probability from material in the colon which had not yet emptied.

During the next seven days the temperature ranged between 98 and 101 degrees centigrade, and the pulse between 78 and 96. The dressings were changed frequently and the wound, on account of the foul odor, was irrigated with potassium permanganate. The patient was not coöperative, would pick the wound at all times, and was having daily bowel movements at this time. Except for a foul discharge from the wound, and a slight elevation of temperature to 101 degrees centigrade, she made an uneventful recovery. On October 19 all sutures were removed, leaving a superficial gap of the skin with slight drainage. Twelve days later the skin and superficial fascia were resutured and the patient, with no evidence of herniation and having normal daily bowel movements, was discharged on November 12, with the abdomen entirely healed. Examination months after discharge showed no changes.

Pathologic Report of Specimen.—Specimen consists of masses of skin and subcutaneous fat, and about thirty inches of intestines, mostly gangrenous with gangrenous mesentery. The mucosa is hemorrhagic and the lumen of the bowel contains much free blood.

COMMENT

The case report is presented because of the unusual occurrence. There must have been a thinned-out, well-developed ventral hernia, to allow the intestines to perforate the skin with the usual intra-abdominal pressure. Fortunately the intestines were not perforated during the elapsed time from occurrence to operation. The resistance of this individual was sufficient to ward off the severe peritonitis which ordinarily would have developed.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

ROUTINE PRECAUTIONS IN SERTHERAPY

ETIOLOGY AND PATHOLOGY OF SERUM SICKNESS

ALBERT P. KRUEGER, M. D. (Department of Bacteriology, University of California, Berkeley). Serum sickness is such a common sequel to the use of antisera of all sorts that a discussion of the subject, even from the viewpoint of theoretical immunology, is germane to the daily experience of the practicing physician.

Serum disease may be divided into two general types. First, the simple exanthem of protean character (urticarial, morbilliform, or scarlatinal), accompanied by fever, painful swollen joints, lymphadenitis, and a moderate degree of albuminuria with, less frequently, some degree of polyneuritis, myalgia, peripheral nerve paralysis and persistent arthritis. This, the common form of the disease, occurs six to fourteen days after the administration of serum, although it may very rarely follow immediately upon serum injection. The symptoms may recur without further injections at intervals of two to five days, and there are recorded as many as four separate eruptions after a single injection.

As to incidence, it may be categorically stated that the larger the amount given, and the more rapid the absorption into the blood stream, the more frequently does the disease appear. The data given below are tabulated from several sources and show the tremendous variation in incidence following single injections of varying quantities of antitoxic sera.

Statistically, the practitioner may assume that following the administration of moderate amounts of purified and concentrated serum given intramuscularly, one in five patients will manifest the disease. This compares most favorably with the earlier figures of 50 to 90 per cent incidence noted with whole horse serum before the purification technique had been developed.

The second and more malignant form of serum sickness fortunately occurs infrequently, and is

characterized by acute shock with anxiety, pallor, dyspnea, rigors, and a rapid and feeble pulse; and is sometimes accompanied by vomiting, diarrhea, and a rapidly progressive edema of the face, pharyngeal tissues and lung. The outcome is occasionally fatal.

This more violent manifestation of serum sickness has its onset immediately following intravenous or intraspinal injections of sera, although the literature contains accounts of its occurrence even after subcutaneous administration. Rarely may the onset be delayed until the appearance of the exanthem.

The physician may expect an incidence of one case of the fatal acute form per one hundred thousand serum injections. The immediate or delayed local reaction not infrequently takes the form of an extensive necrosis at the site of injection, corresponding closely to the Arthus phenomenon seen in experimental animals.

In considering the etiology of serum sickness one might be tempted, as a first approximation, to call the syndrome the exact analogue of anaphylaxis in experimental animals; but such is not altogether the case. In the first place, the symptoms most often follow a first injection of serum with an interval varying from a matter of minutes to some ten days. There is, thus, no sensitizing dose as in animals. Again, one would postulate an immediate anaphylactic response upon successive injections of serum if we assume the mechanism to be a truly anaphylactic one. All the essentials for the reaction are present, that is, there is precipitin free in the blood stream, and corresponding antigen is introduced. Yet immediate symptoms are very rare and some data indicate that serum sickness after a second injection of serum occurs less frequently than after a first. It is obvious, therefore, that certain objections must be overcome before the clinical and the experimental pictures may be considered analogous.

It may be well to summarize available data before attempting to depict the mechanism involved in the production of the clinical syndrome.

(a) Symptoms are due to the foreign serum *per se* and not to the antibody content; for the disease may be produced with sterile normal horse serum. Further, immunization with antigens resulting in the production of antibodies in the blood stream does not increase the percentage incidence of serum sickness.

(b) The symptoms are more apt to be produced by the serum of certain horses than by identically prepared serum from other horses. The variation in incidence with serum from different horses

TABLE 1.—Incidence of Serum Sickness as Related to Amounts Administered

Volume of Serum	Percentage Showing Reaction
1-10 ml.	10
10-20 ml.	30
20-30 ml.	30
30-50 ml.	42
50-100 ml.	55
Over 100 ml.	70

varies from 20 to 90 per cent. This cannot be entirely controlled by pooling sera, for with such preparations the incidence will vary from 30 to 60 per cent.

(c) Concentrated serum is not so apt to produce serum sickness as whole serum, primarily because such sera may be given in smaller amounts and the total dose of foreign protein is consequently lessened. Also purified sera are antigenically less complex, since they consist of the pseudoglobulin fraction alone with the euglobulins and albumins removed.

(d) Horse serum fibrinogen is not the responsible etiologic agent.

(e) Active sensitization against horse serum can be produced in humans, as indicated by skin tests conducted before and after immunization with toxin-antitoxin.

With the clinical picture of serum disease in mind, and also considering the data mentioned above, we cannot state that the syndrome is explainable upon the same relatively simple basis as anaphylaxis in experimental animals. It is possible that the exanthem and accompanying clinical phenomena represent the typical human anaphylactic response which, for its development, requires well-defined quantitative and localizing conditions; as, for example, fixation of precipitin in epidermal cells. In addition man may possess, as do certain other animals, an inherent refractory state to the development of anaphylaxis, and it is likely that sensitization follows upon contact with horse proteins through channels other than direct injection. It would be said, then, that in the common form of the disease the foreign protein constitutes an antigen, and causes the production of antibodies while itself remaining in considerable concentration in the blood stream. When the antibodies have reached a certain critical concentration, the typical reaction occurs and symptoms follow. Upon these assumptions, which rest for the most part upon experimental evidence, it would be possible to explain the clinical manifestations and variations of serum disease as merely special cases of an antigen antibody anaphylactic reaction.

The pathologic changes in serum disease may be briefly disposed of. The swollen joints are usually not red nor do they show any increased temperature. The joints seldom contain free fluid and the swelling may be explained on the basis of periarticular edema. The fluid found in the joint cavity in the exceptional case shows the cytological findings of an acute arthritis, and in such fluid horse serum has been demonstrated. The local changes may then be due to synovial irritation from the localized foreign protein.

The regional lymph nodes, especially those nearest the site of injection, usually become swollen and tender quite early in the course of the disease, and similarly they regress early. This again is largely an edematous swelling which practically never progresses to suppuration. Exceptionally the spleen may become palpable.

The face, more particularly the eyelids and, in addition, the dependent parts of the body, often

show a well-defined edema which is apparently not of renal origin but rather due to local changes in vascular permeability. It is not unusual to find signs of transitory renal irritation which for the most part, appear after the edema is established. During the first few hours of serum sickness there is apt to be a slight leukocytosis, with a moderate increase in the lymphocytes. As the syndrome progresses, the picture changes to a leukopenia, frequently accompanied by a mild eosinophilia.

In summarizing, one would conclude that serum disease is exceedingly protean in its manifestations, that its incidence and severity are related to the amounts of serum injected, the route of injection and the antigenic complexity of the serum used; and finally, that the syndrome is probably explicable as a special case of an anaphylactic reaction.

* * *

TREATMENT AND PRECAUTIONS IN ADMINISTRATION OF SERUM

EDWARD B. SHAW, M. D. (384 Post Street, San Francisco).—The therapeutic use of serum in human beings is frequently followed at varying intervals by reactions which are, in general, no more than annoying, but are occasionally so distressing or dangerous as to necessitate weighing the benefits of serum therapy against these possible adverse effects. Such reactions include those due to nonspecific protein effect, and those in which specific hypersensitiveness is concerned.

Nonspecific Reactions.—The injection, especially intravenously, of any protein or protein-like material, serum, vaccines, pollen solutions, proteose, etc., is frequently followed in a few minutes by a reaction of varying severity. Adults are commonly more affected than children. There is commonly a rise of pulse and temperature which is sometimes to extreme heights, accompanied by chills, convulsions, nausea, vomiting, and prostration. The patient is frequently wretchedly uncomfortable, but there is usually little cause for concern unless the patient's antecedent condition is of such gravity as to impair his ability to withstand such a reaction.

Care in preparation of serum helps in the prevention of these occurrences. The blood of certain horses is more productive of reactions than others, and these should not be used as serum producers. Proper ageing, concentration, and clarification of serum are important.

Intravenous therapy is more dangerous and should be reserved for more serious conditions. When serum is thus employed it must be perfectly clear, should be warmed to body temperature and given very slowly. The coincident injection of dextrose solution has a protective effect.

The chills, hyperpyrexia, and general discomfort are treated symptomatically. Ice caps, cool baths, and continuous, cool colonic saline flushes help reduce the fever. Barbiturates, codein, or morphin are required for sedation. Epinephrin has no place in the treatment of this condition:

it does not serve to ameliorate the symptoms, and it adds to the tachycardia and general discomfort of the patient.

Specific Reactions.—A second group of reactions is due to specific horse serum hypersensitiveness. These reactions may be further divided into two groups—immediate reactions and delayed reactions.

Immediate reactions promptly follow serum administration. They are most violent after intravenous injection; but symptoms may appear after the introduction of a very small amount of serum, and fatal results have followed even subcutaneous reactions. Symptoms closely resemble anaphylactic shock in the guinea-pig; the patient is apprehensive, the skin tingles, urticaria may appear, there is increasing dyspnea, stridor, cyanosis, and finally death results from respiratory failure; or recovery may slowly occur with or without treatment. The picture is so similar to that of anaphylaxis that sometimes the phenomena are assumed to be identical. There is little doubt that the processes are not identical, but certain points of resemblance as well as certain differences are noteworthy clinically.

These reactions resemble anaphylaxis in their symptomatology, in the fact that other evidences of the patient's horse serum hypersensitiveness can often be discovered, and also in the fact that epinephrin is almost specific in the control of symptoms.

The differences between the experimental and clinical phenomena must be no less carefully noted:

1. Patients who develop anaphylaxis-like shock are frequently those with no history of previous serum injection. Unlike the experimental animal which is sensitized by the injection of a small amount of the specific protein at an interval prior to the shocking injection, the mechanism of sensitization in human beings often cannot be determined, and apparently in some cases is a constitutional factor which is unaffected by the patient's environment. Doubtless sensitization occurs in other ways than by injection, but some individuals are profoundly horse serum sensitive without any known previous contact with horse proteins.

It has been denied by some that human beings can ever be artificially sensitized to foreign protein, and it is certain that some individuals fail to exhibit any adverse reaction from several injections of serum at varying intervals. It is hardly less certain that other patients are rendered mildly, or sometimes profoundly, sensitive to horse serum after receiving one or more injections, and thereafter react more or less violently to subsequent injections. Single injections are less apt to sensitize than repeated ones, and such a procedure as the administration of three or four doses of T. A. T., which contains minute amounts of horse serum, at intervals of one or two weeks, is more likely to increase the hazard of a later injection of serum than is, for example, a single prophylactic dose of diphtheria antitoxin.

2. The sensitized guinea-pig can be protected from fatal anaphylaxis by the injection of a very minute dose of the specific protein. This produces very mild shock, from which the animal quickly recovers; and subsequently the animal is, for a time, incapable of the typical response to the injection of a large amount of the protein. In the treatment of sensitive patients attempts are made to utilize the same protective mechanism, the method of desensitization being an effort to produce this state of anti-anaphylaxis. Human behavior herein departs from the laboratory analogue in that the sensitive patient is not invariably protected from severe reaction by the administration of minute or graduated doses of serum. In fact, it is not certain that such a method ever protects. Nevertheless, good clinical practice supports such a procedure, even though it is not invariably successful; it is unquestionably advantageous to observe the effect of initial small doses of serum on the sensitive patient, whether or not they protect him against subsequent larger ones.

Precautions.—When serum is to be given, certain precautions are essential. These measures are particularly important if the intravenous route is to be employed.

History. A careful history regarding hypersensitiveness should be secured as a preliminary. Patients who are allergic to various substances, as indicated by attacks of asthma, hay fever, eczema, and urticaria should be regarded with suspicion. Inasmuch as horse serum is most commonly used, those who are sensitive to horse hair, horse dander, and horse serum, are the subject of gravest concern. These individuals, horse asthmatics, commonly develop asthmatic symptoms when in the vicinity of a horse and cannot ride upon or behind a horse in comfort; one such patient developed severe asthma from horse manure spread on the lawn outside his window. Most horse asthmatics are so extremely sensitive to all horse proteins that they cannot be given horse serum without extreme risk; but a few are so specifically sensitive to cutaneous emanations that serum does not produce a response.

A history of previous injections of (horse) serum is suggestive, although not necessarily productive of hypersensitiveness. Toxin-antitoxin is particularly apt to sensitize, but toxoid, which contains no serum, does not sensitize, and injections of vaccine are, of course, not significant.

Tests for Hypersensitiveness. In every case in which the history is suggestive, tests for hypersensitiveness should be conducted as a preliminary to treatment. It is not amiss to test every case if time permits.

The simplest test consists of the application of a drop of undiluted serum to a superficial scratch on the skin. In sensitive patients a definite reaction usually appears in less than thirty minutes, in the form of an urticarial wheal surrounded by a zone of erythema. The size and promptness of appearance of a reaction is roughly parallel to

the degree of sensitization. A few individuals are generally hypersensitive but lack skin sensitization, so that the absence of a skin reaction is not absolute evidence of safety; a positive skin reaction, however, is a significant warning.

The intracutaneous test is a more refined method, which at the same time introduces some risk of a general reaction. This consists of the intradermal injection of one-tenth cubic centimeter of a one to one hundred dilution of serum in normal saline. A positive reaction appears in from ten to forty minutes, and is similar to the foregoing.

The ophthalmic test consists in applying upon the conjunctiva a drop of diluted or undiluted serum. A reaction consisting of reddening and injection of the conjunctiva appears in a few minutes. When this reaction has definitely appeared, it should be promptly neutralized by the instillation of one to one thousand epinephrin solution, lest ulceration of the conjunctiva be produced.

Desensitization. In all cases in which history or tests indicate the possibility of reactions, the first dose of serum should be very minute, succeeding doses may be given at intervals in increasing amounts, while observing the local and systemic effects of previous doses. This is, of course, an effort to apply the phenomenon of anti-anaphylaxis to clinical use. Many good observers feel that desensitization is a futile gesture, which confers no real protection and is directed against an accident which seldom occurs; nevertheless, it affords a certain degree of safety, and at least permits the clinician to observe the results of minute doses before undertaking the injection of larger amounts.

Desensitizing injections should be made subcutaneously, or subcuticularly, *in an extremity* in such a location that if a generalized reaction occurs a tourniquet may be applied proximal to the site of injection so as to impede absorption. As far as possible all injections of serum should be in a similar location, so that if the necessity arises absorption may be caused to proceed slowly.

The amount of serum first administered should be based on the history and the skin reaction. In very sensitive cases one-half cubic centimeter of a one to one thousand dilution is given, less sensitive cases receiving a one to one hundred or one to ten dilution. Subsequent doses, and the interval between doses, may be decided upon by the response to previous injections. Commonly, injections may be repeated every thirty to forty minutes, using one-half cubic centimeter of 1 to 1000, 1 to 100, 1 to 10, and undiluted serum, following this with the entire dose intramuscularly.

Administration. The intramuscular route meets most requirements for therapy and should usually be employed. The subcutaneous route permits slower absorption and should be reserved for prophylactic serum. The intravenous route is most dangerous, and reactions from its use are most difficult to control. It should be used only for

more serious illnesses, which call for serum therapy as an emergency measure, and should very rarely be employed if there is significant evidence of hypersensitivity. If in the serum-sensitive patient the need for intravenous therapy seems definite, the above desensitizing procedures should be carried out, and then serum given intravenously in similar amounts and in similarly graduated dilutions.

Dextrose solution injections are an important adjuvant to serum therapy. Not only do these reduce protein reactions, but they help to prevent anaphylaxis-like reactions. When serum is to be given intravenously the dextrose solution may first be started, small desensitizing amounts of serum injected along with the dextrose, and finally the flow of the dextrose interrupted by the introduction of serum, which is, in turn, followed by more dextrose.

Treatment of Shock. Serum must never be given in any manner without having epinephrin solution at hand for instant injection. If signs of anaphylaxis-like shock appear, further absorption should be impeded, if the site is accessible, by a tourniquet, and the patient given epinephrin (1 to 1000) in physiological amounts—enough to cause blanching of the lips and acceleration of the pulse. Injections of epinephrin may be repeated; but dangerous symptoms are a matter of a very few minutes and must be promptly combated.

Morphin and other opiates are sometimes advisable in the treatment of prolonged reactions.

Delayed Reactions.—At intervals of three to ten or more days after serum injection, delayed reactions appear which are somewhat similar to immediate reactions, but are spread over a longer period of time and are much less violent or dangerous. The chief symptoms consist of urticaria, which may be most intolerably profuse and persistent; joint swellings, angioneurotic edema, enlargement of the lymphatic glands, and a variety of rashes of a general urticarial nature.

The reactions are caused to appear earlier after injection, and to be more violent, as a result of the factors which favor immediate reactions. A satisfactory clinical explanation of these symptoms is that they appear as a result of serum sensitivity that develops after, and as a result of the injection of serum. When this augments an existing slight degree of sensitivity, the resultant symptoms are caused to appear earlier and more violently.

The symptoms which appear at such an interval are rarely dangerous, but expose the patient to extreme discomfort. The injection of epinephrin will relieve symptoms, but after a short while they usually recur. Small injections of this drug may be given frequently or injections may be given at wider intervals; and as symptoms recur between injections, the site of the last injection may be gently massaged with resultant liberation of small amounts of epinephrin from the site of injection into the circulation. Ephedrin by mouth produces little relief.

Nursing care is of great value, and constant attention should be directed toward the patient's comfort. The frequent application to the superficial skin lesions of a variety of remedies affords relief. For this purpose calamin lotion may be used with the addition of menthol, alcohol, or phenol (phenol must be used with care, for extensive applications, in children); witch-hazel, alone or in combination with bicarbonate of soda; cooling baths with the addition of magnesium sulphate or bicarbonate of soda; iced compresses of solutions of boric acid, soda, or magnesium sulphate, or the application of ointments containing minute amounts of the synthetic local anesthetics.

The attendant itching, pain, irritability and restlessness of these patients is very difficult to relieve, and symptoms may be prolonged over many days. Sedatives, hypnotics, or opiates need to be freely used, as the patient's discomfort is altogether disproportionate to the lack of real severity.

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TREATMENT OF ACCIDENTS INCIDENT TO SERUM THERAPY

CLIFFORD SWEET, M. D. (242 Moss Avenue, Oakland).—Accidents incident to serum therapy should, so far as is possible, be prevented. No patient should be given serum until he has been studied to determine whether or not he is hypersensitive to the serum that is to be given. A careful history should be taken to determine whether or not there have been allergic states in related members of the family, and especially whether or not the patient has previously had asthma, hay fever, urticaria, eczema or other allergic attacks. A negative allergic history should never be accepted as evidence that the serum may be safely given, nor should a positive history be considered a contraindication to its use. A positive history may well emphasize the need for caution, but a negative history should never allow any decrease in the thoroughness of the preliminary study. A previous injection of horse serum, especially since so many children have had diphtheria toxin-antitoxin, and prophylactic tetanus antitoxin should be noted as having possibly established a state of hypersensitivity. The patient's reaction to the former injection of serum is of interest, but may not be accepted as indicating his present state of reactivity.

Every patient should be skin-tested with the serum to be used before it is injected. The few minutes required for this test will not delay needed treatment, and its use will decrease unpleasantly severe and at times fatal reactions to serum. If there is reason to believe that a severe state of hypersensitivity exists, the scratch test with serum diluted one hundred to one thousand times with salt solution should be done. If this is negative, after twenty to thirty minutes 0.1 cubic centimeter of serum the same strength should be injected intra-, not subcutaneously. The injection of 0.1 cubic centimeter of dilute serum subcuta-

neously into a patient who is markedly hypersensitive may cause a severe or even fatal reaction. The idea that one may safely inject 1 cubic centimeter of undiluted serum subcutaneously as a test dose, and as a means of desensitizing the patient, is a dangerous one and should long since have passed out of practice. Intracutaneous injection should be done with the bevel of the hypodermic needle turned toward the surface of the skin in order to avoid the danger of unintentional subcutaneous injection.

If after an interval of fifteen or twenty minutes there are no urticarial pseudopodia about the site of the intracutaneous injection, 0.1 cubic centimeter of undiluted serum may be quite safely injected subcutaneously. Then if no symptoms develop, the entire dose may be injected subcutaneously, intramuscularly, or intravenously. If the injection is given intravenously, it should be given very slowly, and an additional factor of safety is added by diluting the serum with five to ten volumes of 5 to 10 per cent glucose solution, the mixture to be given slowly over a period in excess of fifteen minutes. However, if an urticarial wheal, especially one having pseudopodia about it, arises at the site of the intracutaneous test, the serum must then be given very cautiously in gradually increasing, divided doses over a period of four, five or six hours. For a patient who is evidently hypersensitive, one-tenth cubic centimeter of a 1 to 1000 dilution of the serum should be given subcutaneously. If a reaction of any moment occurs, it should be controlled with an injection of adrenalin, and after the lapse of twenty to thirty minutes the same dose of serum should be repeated. However, if the first subcutaneous injection (one-tenth cubic centimeter of serum diluted 1 to 1000) produces no reaction, a like amount (0.1 cubic centimeter) of serum diluted 1 to 100, 1 to 10, and undiluted, may be injected subcutaneously at intervals of twenty to thirty minutes. If no reaction is produced by the above injections, one-half and then one cubic centimeter may be injected during the next hour, followed by the remainder of the whole amount in divided doses during the next hour or two. However, if any of the doses on the above schedule produce a reaction of any severity, the same or a smaller dose should be used for the following injection, and increases made as gradually as may be necessary for the welfare of the patient, even though an entire day's time be required for the completion of the treatment.

Until one is certain that the patient is not dangerously hypersensitive to the serum, all subcutaneous or intramuscular injections should be made in an extremity so that absorption may be delayed by the application of a tourniquet proximal to the site of injection, should a reaction occur.

When giving serum, a fresh active solution of adrenalin should always be ready for immediate injection to relieve any symptoms that arise. Incidentally, if severe symptoms do arise, such as diffi-

culty in breathing, adrenalin should be given until relief is obtained. Often the failure to obtain relief from the injection of adrenalin is due to an inactive solution, but more often because an insufficient amount is injected. If the adrenalin solution is injected quickly, the greater part of it remains at the site of the injection, and is then released slowly by gentle massage or quickly by vigorous massage of the tissues which contain it. Pallor of the lips is the first dependable sign that an adrenalin effect has been obtained, and until this sign appears sufficient effect for relief of serious serum reaction has not yet occurred. The danger that one may give an overdose of adrenalin can be well guarded against by giving the injection in an extremity and then applying a snug tourniquet proximal to the site of the injection, whenever it is desirable to halt further absorption.

The patient who has been injected with serum should remain under close medical observation for at least one hour following the injection. Delayed reactions of serious grade are of sufficiently frequent occurrence to make this precaution imperative.

Serum Sickness. Patients should be warned that serum sickness may follow the injection of serum after the lapse of hours, or even as long as ten days. This warning should describe the fever, joint pains, and especially the outbreak of urticarial skin lesions that usually are its manifestations. By so warning his patient, the physician not only averts unfair criticism from himself, but also assists in educating the medical public concerning the whole matter of serum reaction, at the same time sparing his patient needless alarm.

The injection of adrenalin (1 to 1000 solution) is the only reliable means of giving direct relief to the patient suffering from serum sickness. The relief obtained from adrenalin is transient, but may be renewed from time to time over a period of twelve to eighteen hours by massage at the site of injection, provided a reasonably generous amount of adrenalin (0.5 to 1 cubic centimeter 1 to 1000 solution) has been injected. Relief from the intense itching of particularly troublesome areas of urticaria can be obtained by the local application of adrenalin to the affected area. Acetyl salicylic acid (aspirin) in adequate dose (0.3; [grains 5] at age six years) once in three or four hours should be given for relief of discomfort, while tub baths as hot as can be borne, to which liberal amounts of sodium bicarbonate have been added, usually allay the itching. Barbituric acid derivatives, such as phenobarbital, amytal, and sodium amytal, should be used to prevent disturbance during the sleeping hours. Treatment is of no avail except that the patient can be spared discomfort. Fortunately serum sickness is self-limited, and even though it may last several days, leaves no aftermath. Consequently, if the attending physician can persuade his patient that the benefit obtained, or the danger avoided is well worth the price of even a severe attack of serum sickness, all is well.

What Medical Care Costs the Average Family.—That the cost of medical care varies from zero in some families to more than the entire year's income in others is the general conclusion drawn from a survey of sickness costs among 36,000 Metropolitan Life Insurance Company employees and members of their immediate families. The highlights of this study are presented in summary form in the November issue of *The Modern Hospital* and the findings compared* with those of the Committee on the Costs of Medical Care (C. C. M. C.) which conducted a similar study of the annual costs of sickness among representative population groups.

Although records were received covering the costs of sickness for 120,334 persons, the survey cannot be said to cover 120,000 years of life. In the first place not all employees were in active service during the entire period in review and in the second place the study of family expense was limited to "natural"† families. Altogether there were 96,000 person-years of life exposed, of which approximately 34,000 were used in the study of costs for total families.

Since the employees live in the more thickly populated sections of the country the survey represents essentially an urban rather than a general population group. No returns from rural areas and few from towns of less than 5,000 were received.

The known incomes of the families were above those of the general population, 85 per cent of the annual incomes for the "natural" families falling into the \$2,000 to \$5,000 group.

Considering the proportion of families receiving certain types of medical care, the results of the Metropolitan and of the C. C. M. C. studies were remarkably similar. In both cases approximately 85 per cent of the families reported doctors' services, approximately 50 per cent dental service and 20 per cent hospital treatment. Among Metropolitan families, 89.1 per cent purchased drugs, 8.8 per cent paid for nurses' service and 21.5 per cent reported oculists' service. Among C. C. M. C. families, on the other hand, these percentages were 97.0, 17.3 and 13.4, respectively. This discrepancy may be explained by the difference in technic used in the two surveys.

Cost Varies Directly With Family Income.—That the cost of medical care varies directly with family income is confirmed by the Metropolitan and the C. C. M. C. findings. About 3.0 per cent of income was expended on medical care regardless of size of family, the per capita costs decreasing from \$47.01 in families with no children to \$13.44 in families with six or more children. In three-fourths of the cases of sickness studied individually, the expense per case was less in families with six or more children than in families with no children or with only one child.

The Most Frequent and Most Expensive Causes of Illness.—In both investigations it was found that the minor respiratory diseases and care of the teeth were the primary factors in sickness costs. Conditions responsible for the largest combined expense in order of importance were care of the teeth, puerperal conditions and minor respiratory conditions. The most expensive single illnesses were due to diseases of the bones, cancer, diseases of the lungs, hernia and intestinal obstruction, tumors, appendicitis, ulcers of the stomach and intestines, and goiter.

Costs of Hospitalized Illness.—The average expense of a case of hospitalized illness was \$163. Actually, the illnesses varied in cost from less than \$10 to more than \$5,000 per case. In one-third of the cases the expense was greater than the average, in one-quarter greater than \$200, and in almost one-fifth larger than \$250 each.

In one-quarter of the cases hospitalized illnesses accounted for 90 per cent or more of the total family expense for medical care, in two-fifths for 80 per cent or more and in two-thirds for 50 per cent or more.

* Comparison is made between the Metropolitan crude results and the C. C. M. C. results adjusted for standard income and size of community distributions.

† A family consisting of husband and wife, or of father, mother and children, the head of which had been in continuous service with the Metropolitan for approximately two years.

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Leaflet Regarding Rules of Publication.—California and Western Medicine has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this journal write to its office requesting a copy of this leaflet.

EDITORIALS*

THE NEW YEAR

California and Western Medicine Extends Greetings.—The financial clouds which have hovered over our country since 1929 have not yet lifted, even though occasionally it does seem that the sun is striving earnestly to break through and shed its warmth and light. All classes of citizens have suffered during these many depressing months; and as a class, few in greater proportion than members of the medical profession. Physicians everywhere have been called upon to work as hard or harder than ever, even though they knew that for much of their labor there would be little or no financial reward. Under these discouraging conditions, the traditions of medical service have been a real inspiration, for these have rendered it possible for medical men and women to make easier the work of carrying on, and the workers, as well as those served, that much the happier.

Signs point to a real, even though perhaps only gradual, improvement in the industrial and other activities of the people of the United States.

*Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comments column, which follows.

CALIFORNIA AND WESTERN MEDICINE, therefore, joins with the members of the California Medical Association in hoping that this new year will witness a dissipation of much of the gloom and sorrow long so much in evidence; and, at the beginning of 1934, this JOURNAL extends to its readers, one and all, the best wishes for the year to come.

FEDERAL FOOD AND DRUGS ACT—U. S. SENATE BILL 1944 (COPELAND)

What Senate Bill 1944 Aims to Accomplish.—Senator Royal S. Copeland of New York has pending in the United States Congress, at Washington, Senate Bill 1944, the objects of which are:

"To prevent the manufacture, shipment, and sale of adulterated or misbranded food, drugs, and cosmetics,* and to regulate traffic therein; to prevent the false advertisement of food, drugs, and cosmetics, and for other purposes."

This bill aims to supplant the present Pure Food and Drugs Act, which became a law (its field of application being limited to interstate shipment of foods and drugs) in 1906, some twenty-seven years ago. That original bill, which was brought into existence largely through the efforts of the late Dr. Harvey W. Wiley, has for a quarter of a century been the only federal bulwark against the sale of impure and dangerous foods and drugs. It is now proposed to amend it by rewriting it and adapting it to the needs of the present day; for in the last twenty-five years the Food and Drug Administration of the United States has learned much concerning the weaknesses of the 1906 Wiley law, beneficent though it was.

The proposed Pure Food and Drugs Act, like the original Wiley law, has two major purposes: one, the protection of the purchasing public; the other, safeguarding the interests of legitimate industry that produces and distributes drugs and foods.

* * *

The Opposition to Senate Bill 1944.—The two aforementioned aims are so worthy of acceptance that it is more than astounding that a strenuous opposition and lobby should be found already existing and arrayed against the measure. The explanation of this is simple. The reason the Copeland bill is being fought is due to the fact that those interests which have been making large fortunes through the production and distribution of impure and mislabeled drugs and foods are willing to spend additional large sums of money to perpetuate their nefarious activities. Members of the medical profession, because of their training and their knowledge of drugs, more than any other class of citizens can appreciate why lay citizens should be protected from such impure and dangerous products. On that account, they should give active support to Senate Bill 1944 (Copeland).

*Editor's Note.—The insertion of cosmetics into the title of the bill is an innovation. To those to whom such insertion may seem strange, it may be in order to quote from a recent article by Jeanette Eaton in *Harper's*: "Feminine beauty, once the Creator's business, is now Big Business. American women spend well over \$2,000,000,000 a year on cosmetics."

In the hearings on the Copeland Bill, recently held before a Senate subcommittee and accounts of which have appeared in the public press, the hand of some of the selfish interests opposing Senate Bill 1944 may be plainly noted. Appended to these comments are excerpts, explanatory of some of the purposes of Senator Copeland's measure in so far as drugs are concerned; and the viewpoints there expressed should have the approval of practically all physicians.

* * *

Senator McNary of Oregon Opposes the Bill.—According to newspaper reports, for example, one of those who is fighting the Copeland Bill is Senator Charles L. McNary of Oregon, who seems to have closed his eyes to the fundamental purposes of Senate Bill 1944, and to the difficulties which have been encountered in enforcing the Wiley Bill of 1906. Seemingly, Senator McNary cares more about the secondary legal procedures, when appeals from the Federal Food and Drug Administration's rulings are taken to the courts, than he does about the protection of innocent lay citizens from impure drugs and foods, or about safeguarding the legitimate merchants who desire to deal only in pure drugs and foods. Our medical colleagues in the State of Oregon, therefore, may perform a real service to the people of the United States if they can show Senator McNary where he seems to be in error in fighting a measure which so aims to promote the best public health interests of the nation.

* * *

How California Medical Association Members Can Aid.—Members of the California Medical Association are urged to write to Senator Hiram Johnson or Senator William McAdoo at Washington, requesting a copy of Senate Bill 1944 (Copeland). The United States Food and Drug Administration, Washington, D. C., also has a series of articles on Senate Bill 1944, which will be sent free of charge on application. It is hoped that the secretaries of component county medical societies and of the county woman's auxiliaries will write for this literature, and make report thereon to their respective organizations. Action favorable to Senate Bill 1944 should be communicated to Senators Johnson and McAdoo, and to local congressmen. Such coöperation will aid greatly in overcoming the violent onslaught that is almost certain to be made by selfish and vicious interests, which may be depended upon to becloud, as much as possible, the real issues, both in committee and when the bill gets on the floors of the Senate and the House.

* * *

High Points of Senate Bill 1944.—A summary of what Senate Bill 1944 (Copeland) aims to do includes the following items:

1. Prevention of false advertising of foods, drugs, and cosmetics;
2. Prevention of traffic in poisonous cosmetics;

3. Establishment of safe tolerances for added poisons in food;

4. Establishment of legally binding definitions and standards for foods;

5. Power to require permits for manufacture of potentially dangerous products when public health cannot otherwise be safeguarded;

6. Prevention of curative claims for drugs when such claims are contrary to the general agreement of medical opinion;

7. Requirement for definitely informative labels for foods and drugs; and

8. Power to protect the public health from future products and practices which may prove dangerous.

* * *

The Drug Aspects of Senate Bill 1944.—In an excellent article printed in the *Oil, Paint and Drug Reporter* of November 27, 1933, Mr. Walter G. Campbell, Chief of the United States Food and Drug Administration, discusses at some length "The Drug Aspects of Senate Bill 1944 (Copeland)," from which document are quoted these pertinent paragraphs:

"I shall begin this discussion of the drug aspects of the Copeland Bill with the destruction of a popular fallacy. This fallacy is that there will be set up in the United States Department of Agriculture a czaristic authority having the power of life and death over the drug and cosmetic industries, and that the constitutional right of trial by jury will be denied. There never was anything more ridiculous nor unfounded.

"What has given rise to such a delusion? The answer is doubtless to be found in the final sentence of Section 23, which reads, 'The findings of fact by the Secretary of Agriculture shall be conclusive if in accordance with the law.'

"There are eighteen words in this sentence, but I can only conclude that a good many people have never read past the first dozen. 'If in accordance with the law,' is the important phrase. Whenever 'the findings of fact' are brought before the court for review, and are found to be arbitrary, capricious, or unsupported by evidence, they will be overturned. At all times the secretary's regulations, under the new bill, as under the present law, are subject to court review and will become invalid if found unreasonable or arbitrary. Since the courts can review every administrative act, it is obvious that there is no transference of power from the courts to the administrative branch of the government.

"So much for the misconception that the Copeland Bill will make the Secretary of Agriculture an autocrat of the medicine cabinet and the dressing table.

"Another fallacy that we might as well do away with is that the new bill denies the right of self-medication. The bill recognizes the right of self-medication. Furthermore, it recognizes the right of every person who medicates himself to know what he is buying, as well as to receive competent directions for using what he buys so that it will not endanger his health. The Copeland Bill is interested only in giving the consumer a chance to know the truth about the medicine he takes, and to protect him against preparations which are dangerous when taken in accordance with the directions on the label. If the Copeland Bill did not recognize the right of self-medication, many of its provisions would be unnecessary.

"Number three in our list of popular fallacies about the Copeland Bill is that it will work against the public by requiring the disclosure of proprietary medicine formulas. . . .

"Contributions from therapeutic research are covered by patent laws, which fully protect anything new or novel about a drug product itself, or about the process for the manufacture of a drug product.

Furthermore, it is almost impossible nowadays to keep secret the composition of drug products. Competitors can usually find out all they want to know through laboratory and other methods of investigation.

"Now let us consider the second alleged reason that the disclosure of formulas would be harmful to the public. . . .

"The man who treats his own ailments has the same need and right as the physician to know what he is using. If the active ingredients are listed on the label, he can treat himself more intelligently, and he can avoid certain drugs to which he knows he is allergic. Are not these considerations vastly more important to his welfare than the alleged psychological advantage of not knowing what is in the drug he is taking? . . .

"The provision branded as 'utterly unreasonable' is simply a means of guaranteeing to the consumer the truth, the whole truth, and nothing but the truth. The public, to whom package medicines are offered, does not have scientific knowledge of the nature and treatment of disease. The patent medicine industry, through its advertising of 'cures' for every known ill, has mis-educated the public in regard to the efficacy of drug products. In no other field of consumer goods has the long-suffering public been so efficiently misinformed. Only a definite provision will serve to offset this situation and give the consumer who wants to treat himself accurate information as to the therapeutic worth of drugs.

"Still another criticism offered by those who oppose the new bill is that all the so-called 'horrible example' medicines and cosmetics have already been put out of existence by the present laws. . . .

"A number of the provisions in the new bill have been the law of the land, as applied to food and drug labels, for twenty-seven years. Section 6, which provides that a food, drug, or cosmetic shall be deemed misbranded 'if its labeling is in any particular false, or by ambiguity or inference creates a misleading impression regarding any food, drug or cosmetic,' has caused considerable disturbance. Except for its inclusion of cosmetics this provision is no broader than the present law. In interpreting the general misbranding provision of the Food and Drugs Act nearly ten years ago, the Supreme Court said: 'The aim of the statute is to prevent that (deception) resulting from indirection and ambiguity, as well as from statements which are false.' This provision, as thus interpreted, has worked no hardship on legitimate drug industries.

"The new bill, while a consumer measure, will also be beneficial to honest manufacturers."

DEATH OF DR. GEORGE G. HUNTER

California Medical Association Loses a Valuable, Beloved Member.—On December 12, death called from his earthly activities Dr. George G. Hunter of Los Angeles. Doctor Hunter had long been prominent in the work of the Los Angeles County Medical Association, had served as its president, and for a number of years had been a member of the Council of the California Medical Association. He had, also, long been associated with the late Dr. Henry G. Brainerd of Los Angeles who, in the year 1922-1923, was president of the California Medical Association. In recent years Doctor Hunter had rendered yeoman service in efforts to bring into being legislation that would make for more humane and scientific care of the mentally sick citizens of California. The circumstances of his taking off are both painful and tragic.

On Saturday, December 9, Doctor Hunter was called to see a woman patient who had been under

his observation and care for several years. Without warning, the patient shot the physician in the back, the bullet coursing through both walls of the stomach and abdomen. It was hoped that the operative procedures might save Doctor Hunter's life, but that was not to be.

Doctor Hunter was beloved by all who knew him. To the profession which he so dearly loved, and in his specialty as a neuropsychiatrist, he gave of the best that was in him. His wise and generous coöperation will be sadly missed in the deliberations of the California Medical Association Council.

"ACUTE UNIT" OF LOS ANGELES COUNTY HOSPITAL FINALLY IN PARTIAL OPERATION

Obstetrical Service Is Installed.—The new twelve-million-dollar "acute unit" of the Los Angeles County General Hospital, which has been a subject of so much discussion for several years past, at last has been partially, even though most modestly occupied. The first group of patients admitted to the new unit at the notable event, which took place on December 12, 1933, are all on the obstetrical service. A photograph of this massive structure, the largest hospital building in the world, is printed on page 70 of this issue.

In due time, if and when this new hospital is put into complete operation, a detailed account of the building will be given. The hospital authorities are making an earnest effort to transfer from the old buildings as many services as possible, and it is hoped that a large part of the new structure will be utilized by the end of January, 1934. In the meantime the following excerpts from one of the Los Angeles newspapers of December 8 may be of interest:

"Out on North State Street is a new modern nineteen-story concrete building. Gardeners are watering the shrubs and trimming the palms and desert cherry trees that beautify the score of acres surrounding the building.

"The building is the new \$12,000,000 General Hospital, patientless as yet.

"Asked a question, a guard at one of the ornate gates said:

"'Oh, they say they're going to move in next week, but they've been saying that for a year and a half.'

"The hospital will be opened next Monday, with two hundred patients of the maternity ward as the first occupants, Superintendent Norman R. Martin, of the hospital, said today.

"In reply to a grand jury query as to why the opening had been delayed, Superintendent Martin declared that transfer of maternity equipment already was under way and that the first patients would be installed next week.

"It will be some time before the building will be fully opened to its normal capacity of 3,500 patients because of the necessary delay in equipping such a vast structure under the specification and bidding system required by law, according to Mr. Martin.

"Connecting the handsome hospital building by a long concrete tunnel, the old hospital building is a strange sight. The first hospital building was put up forty years ago, and additions have been made until the hospital is a series of misshapen buildings, connected by weird runways and spans, the effect being

that of a nightmare, with ill and injured all over the place—in hallways, on porches, and in any nooks large enough for cots.

"Curiously, the new hospital appears to be ready for occupancy by everybody but the patients. There are nurses' lecture rooms with chairs, and the only thing lacking is chalk on the blackboards; elevators with elevator men; a telephone switchboard, with telephone girls at work on calls that are switched into the old hospital; an auditorium for medical talks, and elaborate kitchens with huge soup drums glistening, and all the equipment ready.

"On the other hand, wheel-chairs, obstetric beds, cabinets, and the highly important x-ray, have not yet been installed. . . ."

HUMAN STERILIZATION

California's Experience.—In September, 1933, in its Bedside Medicine department (page 199) CALIFORNIA AND WESTERN MEDICINE printed a symposium on human sterilization. Dr. F. O. Butler, of the Sonoma State Home of California, reported his observations on some 2,264 patients who had been sterilized in that institution. Out of a total of 16,066 human sterilizations performed in the United States, recorded up to January 1, 1933, a total of 8,504 were credited to the State of California. These remarkable figures by California become of more interest in view of the new human sterilization law which will become operative in Germany at the beginning of the new year. The Human Betterment Foundation is authority for the statement that in the United States there are "six million persons who have been, are now, or at some time will be legally committed as insane to State institutions." Again, they state:

"America's Burden."—This, then, is the situation which America faces now: 18,000,000 persons who are, or at some time during life will be, burdened by mental disease or mental defect, and in one way or another be a charge and tax upon the rest of the population. It challenges every thoughtful person. . . ."

* * *

Germany's Proposed Sterilization.—As the January issue of CALIFORNIA AND WESTERN MEDICINE is being prepared for press, some dispatches from Europe on proposed human sterilization in Germany, challenge our attention. Because human sterilization is a problem having intimate connection in the fields of heredity, medicine, social ethics, and also political policy and economics, and because in the immediate years to come much consideration will be given to the subject and the principles involved (during which California's experience will be much discussed), it may be proper to append some excerpts from current cablegrams:

STERILIZATION COURTS NAMED FOR GERMANY

"Last-minute preparations were under way in Berlin on December 20 for executing one of the most significant features of Chancellor Hitler's program to make Germany physically fit—the sterilization of persons suffering incurable diseases—according to an Associated Press dispatch.

"On January 1, 1700 'Eugenic Courts' will begin functioning. These will pass judgment on at least 400,000 men and women considered 'hereditary defectives.'

Will Take Two Years

"Depriving these people of reproductive power will take at least two years, it was estimated.

"Instructions have been issued hospital and sanitarium officials, as well as heads of penitentiaries and prisons, to get a list of incurable and habitual criminals ready by January 1.

"The sterilization operations will be performed under court order, after a system of checks from which there will be no appeal.

"Of the 'Eugenic Courts,' one hundred are in Prussia alone, besides twenty-seven 'Supreme Eugenic Courts.'

Diseases Listed

"Nine classes of congenital diseases are specified, the majority of them among the mentally defective, as calling for the operations.

"The sterilization law is applicable, among others, to feeble-mindedness, insanity, blindness, deafness, and serious physical deformities.

"Extreme inebriety has been urged as another affliction to be included.

"The sterilization law was described as the most drastic measure to raise the national efficiency since the days of Ancient Sparta, when weak infants were exposed."

✓ ✓ ✓

"Medical experts in Berlin announced on December 20 that 400,000 persons, half of them men and half of them women, would be subjected to sterilization soon under the law for prevention of diseased progeny, according to a United Press dispatch.

"Fifty per cent of those affected were said to be suffering from congenital feeble-mindedness.

"Total expenses of the sterilization were estimated at 14,000,000 marks (\$5,264,000), costing 20 marks for each man and 50 marks for each woman.

"The experts contended the money soon would be repaid, as Professor Lenz estimated the state was spending 350,000,000 marks annually on the care of the mentally afflicted, while Professor Burgdorfer estimated it at close to 1,000,000,000 marks."

✓ ✓ ✓

"For the present the fate of at least 400,000 Germans, the *Deutsche Zeitung* says, are involved. These comprising practically the same number of both sexes.

Figures Given

"The law is applicable to hereditary:

"1. Feeble-mindedness, tentatively estimated at 200,000 cases.

"2. Schizomania, 80,000.

"3. Insanity, 20,000.

"4. Epilepsy, 60,000.

"5. Saint Vitus dance, 600.

"6. Blindness, 4,000.

"7. Deaf and dumbness, 18,000.

"8. Serious physical deformity, 20,000.

"9. Chronic alcoholism, 10,000.

"The *Deutsche Zeitung's* eugenics expert said the task could be completed in a period of two years.

"He holds the outlay would represent a saving in the end. Expenditures for the care of the nation's insane alone amount to 700,000,000 marks (about \$261,030,000)." . . .

Having now freed man from much or most of his ancient labors, the next great work for science is to make of this new freeman with "time to think" a being who is happy, not because of the amazing things he owns, but because of the amazing things he can do and think.—John J. Davis, United States Senator from Pennsylvania.

EDITORIAL COMMENT*

THE RÔLE OF HISTAMIN IN ALLERGY

Sir Thomas Lewis,¹ in his researches upon the blood vessels of the human skin, predicated the hypothesis that the urticarial reaction of the skin to injury is due to the release of a histamin-like substance. With scientific caution, he has been chary in identifying this substance as histamin, despite the fact that practically all evidence points to this identity. However, the rôle of this histamin-like substance in the production of a characteristic allergic reaction such as urticaria has stimulated a search for further evidence linking the allergic and anaphylactic reactions to histamin.

Dale,² in his Croonian lectures, mentions the fact that chemical analysis of the lungs of man shows 35 milligrams of histamin per kilo, and the epidermis 24 milligrams per kilo. The significance of this lies in the fact that the lungs and epidermis of man contain the largest proportion of histamin, and are also the most common sites of allergic reactions.

Gebauer and his co-workers³ have obtained a histamin-like substance from vena cava blood after anaphylactic shock. They feel that all evidence points to the identity of this substance with histamin, and probably to its identity with Manwaring's hepatic anaphylotoxin. Using strips of guinea-pig intestine for testing purposes, they found that vena cava blood after anaphylactic shock is active, while systemic and portal blood is not; and also that the substance is not specific and has no latent period in its action on the intestinal strip. They also show that the substance is easily diffusible, basic in character, inactivated by diazotized sulphanilic acid, lowers blood pressure on injection in cats, produces characteristic wheals, and does not contract the mouse intestine, all these properties being characteristic of histamin.

Bartosch, Feldberg, and Nagel⁴ have found that the perfusion fluid from the anaphylactic guinea-pig lung also contains a histamin-like substance.

With these facts in mind, one is tempted to theorize on the possible rôle of histamin in clinical allergy: that in asthma there is a release of histamin in the lung, and in urticaria a release of histamin in the skin; that the low blood pressure commonly found in allergic individuals is a

histamin effect. Although this theory affirms the mediation of histamin in the production of symptoms, we have as yet no acceptable explanation as to why histamin is released from the tissues, particularly in allergic individuals.

The field for speculation is wide and will undoubtedly stimulate research in the fundamentals of allergy; but as yet we must wait upon an explanation for the peculiarities of the allergic constitution.

1136 West Sixth Street.

HYMAN MILLER,
Los Angeles.

AMEBIC DYSENTERY

In the midst of so much discussion of amebic dysentery, it may be proper to call attention to one phase of a frequently recommended treatment.

The dosage of emetin hydrochlorid is often too large, when given over a short period of from nine to twelve days. It should be used in smaller dosage and extended over a longer period. Time is a vital element in the peculiar action of the drug. Large dosage will produce injury to the patient, and do but little damage to the amebae. We believe that one-third of a grain intravenously, daily the first week, repeated on alternate days thereafter for five doses, will accomplish as much as the large dosage and practically insure against injury by the drug. The same dosage twice weekly may be continued for months, with no cumulative action. The liver is thus protected and there is less danger of relapse. Meanwhile the treatment with carbarsone should start coincidentally with the emetin and be continued with one capsule each morning and evening, for ten days only. One should be constantly on guard against arsenical saturation, which is usually first manifested by redness or itching of the skin. The arsenical treatment may be repeated in full or in part, after a ten-day interval. One repetition usually suffices to rid the patient of tropozoites and cysts. Watchful search for organisms in the stools during the next year, at intervals of two or three months, is the safest procedure in guarding the patient against damage from the organism and from the drug.

Much has been said about the cumulative action of emetin and its damage to the heart muscle. There will be no heart symptoms or muscle tiredness, and none but good after-effects, if the above method is followed. The first complaint of muscle tiredness demands the lengthening of the intervals in the administration of the drug. This symptom shows saturation. The drug should not be given beyond its physiologic activity. The same is true of arsenic. This treatment, when so carried on, will save the profession much criticism and give the patient results equal to quinin in malaria. We have clinically checked the hearts of many emetin-treated patients and have been unable to find a single damaged heart, although many of these patients came complaining of heart symptoms at the beginning. Dr. Robert Langley has checked the electrocardiography of these hearts and has found every one normal.

* This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

¹ Lewis, Thomas: *Blood Vessels of the Human Skin*. Shaw & Sons, Ltd., London, 1927.

² Dale, H. H.: *Croonian Lectures on Some Chemical Factors in the Control of the Circulation*, *Lancet*, 216:1179, Vol. 1 (June 8), 1929.

³ Gebauer, E., Fuelnegg, E., and Dragstadt, C. A.: *The Nature of Physiologically Active Substance Appearing During Anaphylactic Shock*, *Am. J. Physiol.*, 102:520-526 (Nov.), 1932.

⁴ Bartosch, R., Feldberg, W., and Nagel, E.: *Weitere Versuche über das Freiwerden eines histaminähnlichen Stoffes aus der durchströmten Lunge sensibilisierter Meer-schweinchen beim Auflösen einer anaphylaktischen Lungenstarre*. *Pflügers Archiv für die gesamte Physiologie des Menschen und der Tiere*, 231. Band. 4. und 5. Heft. 1933.

We cannot refrain from expressing considerable doubt as to the epidemic possibilities of the amebic infection. It is an endemic disease and is biologically so. For many years we who have studied the subject know it has existed in every state in the Union in sufficient numbers to recommend, in every thorough examination, careful search for its presence. Bacillary dysentery is more common in this country than is generally conceded. Logically, a great many of the bacillary cases will also be ameba-infested. Bacillary dysentery can easily be epidemic, and there are many symptoms to suggest its presence in the cases recently reported. I feel sure there need be no fear of an epidemic of amebiasis in our country.

1930 Wilshire Boulevard.

JOHN V. BARROW,
Los Angeles.

CORNS AND DEFORMITIES OF THE FIFTH TOE

The little toe is very frequently a grave offender to the civilized individual, causing pain, discomfort, and unsightliness. The toe is oftentimes claw- or hammer-shaped, and is therefore a predisposing factor to severe pain due to corns and inflammations of the bursa and periosteum. The exciting agent is the shoe, with its pressure upon the deformed toe. But we cannot always blame the footwear; even a wide enough shoe will cause pressure disturbance when the little toe is deformed or overlapping its neighbor.

This deformity is especially common in statically malformed feet such as flat- or high-arched feet. But it must be remembered that much disfigurement of the fifth toe is due to degenerative changes in men. Not less than half of the cases present a synostosis, *i. e.*, an abnormal osseous union of the terminal and second phalanges, so that the toe contains not two but only one phalangeal joint. Such rudimentary development we find particularly in the middle phalanx, which even if not united with the last phalanx is short and square, its width at times being greater than its length. Unfortunately, the synostosis develops with the toe in a flexed position; the apex of the angle pointing upward and causing pressure trouble. The flexor brevis minimus digitus muscle is also undergoing retrogressive changes: in most instances it exerts no action upon the toe at all; in others contraction is so weak that it has hardly any toe effect. The rudimentary development and action of the muscles can be noticed especially in cases where the above synostosis has developed.

The little toe is not the only one in which retrogressive or degenerative changes are noticeable. The neighboring, fourth and third, toes frequently show traces of retarded development. This is seen mainly in the middle, but at times also in the terminal phalanges. The second toe only is, generally, free from these changes. From this explanation it is obvious that the malformations of the little toe, with their discomfort and pain, are not entirely due to the ill-fitting shoe, but result from the deformed development.

It is fallacious to advise an amputation of any toe, including the last one; although the loss of the little toe may not give rise to any trouble, it should be avoided, if only for the reason that the foot adopts a crippling appearance. The cure of such deformed toes can be had by operative procedure, which consists in ankylosing the phalanges in a straight position after a wedge-shaped resection of bone from each of them.

In cases where the toe is deviated outward, over- or underlapping its neighbor, the contracted joint capsule on the mesial surface must be severed or stretched, and the elongated part of the capsule on the lateral surface must be shortened after the toe has been straightened. In addition to the plication of the capsule, also the adductor minimus digitus must be shortened in order to hold the toe permanently in a straighter line.

727 West Seventh Street.

A. GOTTLIEB,
Los Angeles.

*Operation and Conduct of Tuberculosis Clinics.**—A community which manifests a real interest in tuberculosis clinics is producing constantly a higher ratio of tax producers. Lack of such interest, on the contrary, increases the ratio of tax consumers.

No community endeavor produces more far-reaching benefits in the early discovery of tuberculosis than the tuberculosis clinic. Properly equipped and satisfactorily administered, such a clinic should be a diagnostic school for practicing physicians, a public health school for the community, a scientific clearing house for suspected and doubtful cases and a haven of hope and service for victims of the disease who are not appropriate cases for sanatorium treatment or who are not in a position to employ a family doctor. An atmosphere of private consultation is an essential feature of every clinic.

A tuberculosis clinic should be supported by public funds. Where necessary, supplemental funds may be granted by private agencies in order to provide adequate personnel and equipment.

Unquestionably, the pioneer work performed by unofficial agencies in demonstrating the value of such clinics has been a potent factor in making this service almost universally available. These agencies have used, and should continue to use, every effort to induce public officials to take over this function. As in all government activity, the human side when correlated with the scientific, makes a firm and lasting platform of action. Lack of either of these elements necessarily results in an unbalanced program, lack of popular support and mediocre service.

No aspect of public health, with its varied sociological problems, demands more understanding and humane administration than that concerned with tuberculosis. A clinic program which is not designed to compensate for the varied social maladjustments of tuberculous cases and families is un-American in its philosophy and cannot be expected to achieve other than questionable results.

Public health, medical practice and social welfare are inextricably interwoven in the fundamental purposes of a tuberculosis clinic. In each of these fields, both the patient and society should be beneficiaries of the service. Although the patient may receive the most direct benefits, his family, associates, and the community constantly reap advantages in direct proportion to the thoroughness of the clinic work.

* Abstract of paper by Robert E. Plunkett, M.D., director, Division of Tuberculosis, State Department of Health. Presented at the annual meeting of the New Jersey Tuberculosis League, Trenton, October 19, 1933.

STATE MEDICAL ASSOCIATIONS

This department contains official notices, reports of county society proceedings and other information having to do with the state associations and their component county societies. The copy for the department is edited by the state association secretaries, to whom communications for this department should be sent. Rosters of state association officers and committees and of component county societies and affiliated organizations, are printed in the directories noted under Miscellany, on the front cover index.

CALIFORNIA MEDICAL ASSOCIATION

GEORGE G. REINLE President
CLARENCE G. TOLAND.....President-Elect
EMMA W. POPE.....Secretary-Treasurer

OFFICIAL NOTICES

Railroad Transportation to Riverside—Annual Session (April 30 to May 3, 1934).—Buy through ticket to Riverside on *Sunset Limited*, Sunday, April 29. If twenty-five or more passengers on the Sunday night *Limited* hold Riverside tickets, special electric trains to Riverside will connect at the Southern Pacific depot in Los Angeles, to take passengers direct to Riverside. The *Sunset Limited* leaves San Francisco at 6:45 p. m. and reaches Los Angeles at 8:15 a. m.

The Lark and Padre arrive too late to permit attendance at the opening of the Monday general session.

Buy your ticket direct to Riverside, via Los Angeles, on *Sunset Limited*. Round trip, \$21.10.

Hotel Rates for Annual Session April 30 to May 3, 1934

MISSION INN, CONVENTION HEADQUARTERS
American Plan

Single rooms without bath, \$6 per day.
Single room with bath, \$8 per day.
Double room without bath, \$11 per day.
Double room with bath, \$13 per day.

Other Riverside Hotels *European Plan*

Reynolds Hotel—One Hundred Rooms

Single rooms without bath, \$1.50.
Single rooms with bath, \$2.50.
Double rooms without bath, \$2.50.
Double rooms with bath, \$3.50.

Tetley Hotel—One Hundred Rooms

Single rooms without bath, \$1 and \$1.50.
Single rooms with bath, \$1.50 and \$2.
Double rooms without bath, \$1.50 and \$2.
Double rooms with bath, \$2 and \$3.

Plaza Hotel—Forty-Two Rooms*

Single rooms without bath, \$1.
Single rooms with bath, \$2 and \$2.50.
Double rooms without bath, \$1.50.
Double rooms with bath, \$3.

Potter Hotel—Twenty-Six Rooms

Single rooms with bath, \$2 and \$2.50.
Double rooms with bath, \$3 (garage included).

Warrington Hotel—Twenty-Eight Rooms

Single rooms without bath, \$1.
Single rooms with bath, \$1.50.
Double rooms with bath, \$2.50.

Aureau Vista Hotel—Twenty Rooms

Single rooms with bath, \$1.50 and \$2.50.
Double rooms with bath (twin beds), \$2 and \$3.50.

Victoria Hotel—Twenty Rooms

Single rooms without bath, \$1.
Single rooms with bath, \$2.
Double rooms without bath, \$2.
Double rooms with bath, \$2 and \$3.50.

* Connecting rooms with bath, deduct 50 cents from rate of two rooms. Suites available for parties of three and four.

Council Meeting.—The next meeting of the Council will be held in the offices of the Association, room 2004, 450 Sutter Street, San Francisco, on Saturday, January 20, 1934.

* * *

Application for Place on Annual Program.—Members who desire to present papers before the 1934 annual session, which will be held at Riverside, should write to the secretary of the section before which the particular subject should be presented.

Names and addresses of section officers are regularly published on advertising page 4 of each issue of *CALIFORNIA AND WESTERN MEDICINE*.

When requesting place on the program, a brief résumé of the paper should accompany the application.

* * *

Committee on Scientific Exhibits.—To stimulate greater interest in the scientific exhibit at the annual session, a special committee has been appointed by the Council: William J. Kerr, M. D., Lyell C. Kinney, M. D., Frederick Leet Reichert, M. D., Ernest M. Hall, M. D., and Elbridge Best, M. D., chairman.

* * *

Scientific Exhibits.—Those who are interested in planning a scientific exhibit at the Riverside meeting should apply for space to the Committee on Scientific Exhibits through the State Association office, room 2004, 450 Sutter Street, San Francisco, before the first of March, 1934.

In making application give title and description of exhibit with an estimated amount of floor and/or wall space required.

COMPONENT COUNTY MEDICAL SOCIETIES

FRESNO COUNTY

The annual meeting of the Fresno County Medical Society was held December 5 at 8 p. m. in the University Sequoia Club, Dr. E. J. Schmidt presiding. Dr. Neil J. Dau acted as secretary.

The application of Dr. Lloyd James was read before the society. Dr. V. Millaschich was elected to membership.

Dr. A. E. Anderson gave a brief résumé of the activities of the Hospital Insurance Committee, and stated that the Fresno County Medical Society was now ready to proceed with incorporation.

Doctor Anderson moved that the directors of the county medical society and the groups of men to be elected as directors of the corporation be empowered and authorized to proceed with the steps necessary to offer this service to the public as soon as possible. Doctor Scarboro seconded the motion, and it was passed favorably.

Doctor Dau moved that the county medical society employ Mr. Gilbert Jertberg (recommended by Mr. Hartley Peart). This motion was seconded by Doctor Randel and passed favorably.

Under new business the following were elected directors of the Hospital Insurance Plan: Doctors A. E. Anderson, J. R. Walker, and G. H. Sciaroni (three years); Doctors C. Collins, T. Sample, and E. Couey (two years); Doctors J. Morgan, Guy Manson, and W. Wiese (one year).

Under election of officers for the new year the following were elected: President, Neil J. Dau; first vice-president, W. F. Wiese; second vice-president, Kenneth Staniford; secretary, Henry Randel; librarian,

G. A. Hare. Board of Directors—E. J. Schmidt. Delegates—G. W. Walker, G. H. Sciaroni, and T. F. Madden. Alternates—E. R. Scarboro, Kenneth Staniford, R. W. Dahlgren.

NEIL J. DAU, *Secretary*.

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MENDOCINO COUNTY

The regular meeting of the Mendocino County Medical Society was held in Talmage at 7 p. m., December 6.

Before the regular program, Dr. and Mrs. R. A. Cushman entertained at dinner the combined County Medical Society and Woman's Auxiliary.

The following were present: Doctors Babcock, Bennett, Bowman, Clark, Cleland, Cushman, Hill, Hummel, Kirwin, LeBaron, Pinto, Rea, Rogers, Starbuck, Strong, Toller, and Wrinkle. Mesdames Bennett, Bowman, Cushman, Gleason, Hill, Kirwin, LeBaron, Pinto, Rankin, Rea, Rogers, and Toller.

Doctor Cushman discussed early medical conditions in California.

The following committees were appointed:

Physical Therapy—Doctors Van Allen and Wolfe.

Education—Doctors Cleland and Hummel.

Cancer—Doctors Kirwin and Toller.

Medical Advisory to County Relief Committee—Doctors Babcock, Bowman, Cleland, Hill, Pinto, Rea, Scudder, and Strong.

Dr. Henry Rogers of Petaluma very thoroughly explained the activities of the State Association, especially as to the distribution of the yearly budget.

On motion of Doctors Cushman and Babcock, Doctor Bowman was nominated and elected by acclamation as president of the society for 1934.

On motion of Doctors Cushman and Kirwin, Doctor Toller was nominated and elected by acclamation as secretary-treasurer of the society for 1934.

Doctor Cushman continues as delegate to the state convention.

A combined social meeting of the Woman's Auxiliary and the County Medical Society was the climax of a most pleasant evening.

PAUL J. BOWMAN, *Secretary*.

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ORANGE COUNTY

The December meeting of the Orange County Medical Society was held in the Chapel of the Orange County Hospital at 8 p. m.

Dr. Mabel Geddes was elected to membership in the local society on transfer from Humboldt County.

Following the usual brief business session, mimeographed copies of correspondence from the State Association, in regard to the federal emergency relief fee schedule to be paid private physicians for work done on indigents referred through the Welfare Department, were given to each individual. The matter was referred to the Public Relations Committee.

Two representatives from a health insurance group operating in Los Angeles and planning to establish a branch in Orange County were heard. The matter was referred to the Public Relations Committee and the Committee on Medical Economics for joint investigation.

The annual election of officers was then held, with the following result. In each case, there being only one nominee, the secretary was instructed to cast a unanimous vote: President, Dr. H. Huffman; vice-president, Dr. R. E. Hawes; secretary-treasurer, Dr. W. S. Wehrly; librarian, Dr. C. D. Ball; councilor, Dr. F. H. Gobar, to succeed himself and to serve for 1934-1936. Delegate for 1934-1935, Dr. D. R. Ball, to succeed himself. Alternate, Dr. G. W. Olson.

Doctor Roblee, district councilor, then spoke on *What Do You Get for Your Money?* This was followed by Mr. Otto Jacobs, on *Treatment of Cases from the Legal Aspect*. Doctor Chase then gave an interesting paper on *Radiologist in Court—Anomalies and Errors in X-Ray Interpretation*.

WALDO S. WEHRLY, *Secretary-Treasurer*.

SACRAMENTO COUNTY

The regular meeting of the Sacramento Society for Medical Improvement was held at the Elks Temple on Tuesday evening, October 17, 1933. The president Dr. George Briggs, called the meeting to order at 8:30 p. m. Sixty-six members were present.

Mr. Faulkner, in a short speech, made an appeal for the Sacramento Community Chest.

Doctor Wilder reported a case of foreign body—a piece of glass tubing—in the male urethra.

The papers for the evening were devoted to the subject of cystoscopic prostatectomy.

Dr. E. W. Beach opened the symposium with a historical account of *The Treatment of Obstruction to the Flow of Urine*. The three types of prostatectomy—suprapubic, perineal, and transurethral resection—were discussed and the indications for each type of operation mentioned. Doctor Beach stressed the point that there was a definite operation for every type of prostatic pathology. The paper was well illustrated by lantern slides and a moving-picture film.

Dr. Frank Ohanneson continued the symposium with a paper on the *Causes of Mortality and Complications Following Transurethral Prostatic Resection*.

Dr. E. M. Wilder stressed the importance of surgical removal of the prostate for certain types of hyperprostatism.

Dr. Nathan G. Hale closed the symposium with a paper entitled *Transurethral Resection for Relief of Prostatism*. Doctor Hale stressed the point that the type of prostatic operation to use on a given patient depended entirely on the prostatic pathology present in that patient.

The transfer of Doctor Harada from the San Francisco County Medical Society to the Sacramento Society was unanimously ratified. The applications of Doctors O'Brien, Boscoe, and Anderson were unanimously accepted.

The application of Dr. A. A. Atkinson was read for the first time.

FRANK W. LEE, *Secretary*.

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SAN BERNARDINO COUNTY

The San Bernardino County Medical Society held its regular meeting at the County Charity Hospital in San Bernardino on Tuesday, December 5, 1933.

A letter from the secretary of the Riverside County Medical Society, regarding a special meeting to be held on December 20, was read.

A letter from Doctor Dickie, regarding commercial hospital associations, was read, and as a result of this letter it was decided to postpone the vote on the proposed change in the by-laws until the Committee on Public Relations could make a further report.

Dr. E. J. Eytinge, as a member of the Medical Advisory Board of the County Hospital, briefly discussed certain phases of its management.

The application of Doctor Drummond of Randsburg was voted on and accepted. The reinstatement of Doctors Kell and Reed was voted on and accepted.

The scientific paper of the evening, *Endocrine Types*, illustrated with lantern slides, was presented by Dr. C. A. Wright of Los Angeles.

The meeting adjourned at 10:15 p. m., after which refreshments were served.

E. J. EYTINGE, *Secretary*.

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SANTA CRUZ COUNTY

The October meeting of the Santa Cruz County Society was held in Santa Cruz on October 10, 1933. The speaker of the evening, Dr. Harry Alderson, presented an illustrated review and demonstration of dermatologic conditions of interest to the man engaged in general practice. A general discussion followed the pictures and proved very instructive.

The application of Dr. Reginald Rood of Davenport for membership was read and referred to the board of censors.

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The November meeting of the society was held in Watsonville on November 14. The application of

Doctor Reginald Rood was approved and he was welcomed as a new member of the society.

Doctor Merrill Mensor of San Francisco was the speaker of the evening. His subject concerned industrial injuries, especially those of an orthopedic nature, and contained much valuable information. Lantern slides were used to supplement much of the data, and several new types of splints were demonstrated.

Among those absent at the November meeting was Dr. Ehler Eiskamp of Watsonville, who recently had sustained a fracture of the ankle. Recent favorable reports concerning his convalescence, however, indicate that he will soon be back with us.

SAMUEL B. RANDALL, *Secretary*.



SHASTA COUNTY

The Shasta County Medical Society held its regular meeting at Dozier's Hospital on December 6, 1933. A discussion regarding the admittance of part-pay patients in county hospitals was held and it was unanimously voted by all the members that the society did not approve of the commercializing of county hospitals and the admittance of pay patients, but that county hospitals should only be used for indigent and poor people.

Dr. Guy Leslie Kay was elected a member of the society. Dr. M. D. Pratt was elected president. Dr. F. Stabel, vice-president, and Dr. F. H. Olberg, secretary-treasurer for the next year. F. H. OLBERG, *Secretary*.



SOLANO COUNTY

The Solano County Medical Society held the last meeting of the year, 1933, at the Hotel Casa de Vallejo on Tuesday evening, December 5.

Dr. John W. Green was elected president; Dr. Cary A. Snoddy, vice-president; and Dr. A. J. Ryan, secretary-treasurer, for the year 1934. Delegates to the California Medical Association convention at Riverside were also elected. Dr. P. B. Fry of Benicia is delegate, and Dr. C. A. Snoddy of Vallejo is alternate.

It was noted at this meeting that 88 per cent of the active, practicing physicians in Solano County were members of the county medical society. Dr. Henry Rogers, councilor of the California Medical Association, spoke at length on various matters pertaining to the California Medical Association, its aims, and the facts which are new and interesting concerning unemployment relief.

Doctor Rogers' remarks were followed by a presentation of the subject, *Hypertrophied Prostates*. Dr. Henry Kreutzman of San Francisco was the guest speaker, and after going into the symptoms, pathology, and surgical methods which have been in use for years, he presented a practically new method of surgical attack by a cautery loop, used through the urethra. This method was demonstrated by a motion picture which showed all the details of the performance of this new operation. The meeting was well attended and enjoyed by all present.



The October meeting was also well attended and much enjoyed, the guest speaker being Dr. LeRoy Brooks of San Francisco, who spoke on *Postoperative Care*.



The November meeting was addressed by Dr. Max Rothschild of San Francisco, on the subject of *Pulmonary Tuberculosis*, with indications for compression of the lung, and a discussion of artificial means of compression, and a new surgical method of treatment called phrenectomy. Doctor Rothschild presented some interesting x-ray pictures of the lung, both before and after phrenectomy. A surgical explanation of phrenectomy was presented by Dr. G. D. Delprat. Discussion was general, many questions being asked, some of which were answered by Dr. H. C. Warren of San Francisco.

JOHN W. GREEN, *Secretary*.

SONOMA COUNTY

The Sonoma County Medical Society held its annual meeting at Sonoma Mission Inn on December 9, 1933, at 7 p. m. with a large attendance of members and their ladies.

During the turkey dinner a soloist rendered pleasing songs, and after the dinner Dr. F. E. Sohler told us of some of his experiences and impressions while in Russia this last summer. His remarks were most interesting and were appreciated by all present.

A business meeting was then held, officers' reports received and ordered filed, and communications were read and debated.

The following members were elected to office for the year 1934: President, Dr. E. J. Finnerty of Sonoma; vice-president, Dr. F. O. Butler of Eldridge; secretary, Dr. W. C. Shipley of Santa Rosa; treasurer, Dr. A. A. Thurlow of Santa Rosa.

Dr. S. Z. Peoples of Petaluma was reelected a member of the board of censors to serve until December 31, 1936.

Other minor business was transacted and the meeting adjourned to the main dining room, where dancing was enjoyed.

W. C. SHIPLEY, *Secretary*.



STANISLAUS COUNTY

The November meeting of the Stanislaus County Medical Society was held on the 10th at Grollman's, 820 Twelfth Street. The meeting was called to order by the president, Dr. Donald Robertson. Eighteen members were present.

A bill for projector, screen, and case, amounting to \$139.95, was ordered paid.

It was voted by the society to present Mrs. R. E. Maxwell a box of candy, for making a case for the picture projector.

Dr. John H. Woolsey of the Woodland Clinic gave a very interesting talk on *Lesions of the Colon*.

Dr. Earl H. Gray of Woodland gave a talk on *Radiologic Studies of Fractures*.

The following officers for 1934 were elected: President, Dr. J. A. Porter; vice-president, Dr. Hans Hartman; secretary-treasurer, Dr. Richard Husband; censor (for three years), Dr. E. G. Allen; delegate, Dr. R. S. Hiatt.

J. A. PORTER, *Secretary*.



TULARE COUNTY

The regular November meeting of the Tulare County Medical Society was held on the 19th at 2 p. m. at Motley's Café in Visalia. A buffet luncheon was served.

All regular business procedures were dispensed with and the entire meeting given over to the scientific program for the afternoon. Dr. Albert G. Bower of Glendale prepared a clinic on communicable diseases. He was assisted by Doctors Tobias and Vener. These men discussed epidemic and cerebrospinal meningitis; nutritional factors in the care of communicable diseases; tetanus; nonspecific laryngeal tracheitis; pertussis; and measles. Therapeutics and practical aspects were particularly stressed. A round table of general discussion followed and a decidedly valuable meeting was adjourned at 5:30 o'clock.

Those in attendance were Doctors Preston, Kohn, Beck, A. Bond, N. Miller, E. Bond, Fels, Parkinson, Fowler, McClure, Fuller, Barber, Guido, Brigham, Weiss, Betts, Tourtilott, and Hicks.



The stated meeting of the Tulare County Medical Society was held at 5:30 p. m. Sunday, December 10, 1933. A dinner preceded the program.

Various communications were read. A discussion of local dues for the ensuing year was voiced and suggestions offered for a 50 per cent reduction. Doctor Fillmore reported on the investigations of the Education Committee.

Election of officers for 1934 resulted in the following unanimous ballot: President, Dr. Donald Fowler

of Exeter; vice-president, Dr. Hicks of Tulare; secretary-treasurer, Dr. Karl F. Weiss of Visalia. Censors, Dr. E. R. Zumwalt of Tulare (one year), Dr. R. C. Hill of Exeter (two years); Dr. W. W. Tourtilott of Porterville (three years). Delegate, Dr. Frank Kohn of Tulare. Alternate, Dr. Donald Fowler of Exeter.

These officers will assume their new duties at the first 1934 meeting.

The guest speaker of the evening, Dr. Frederic C. Bost, orthopedic surgeon of San Francisco, was introduced and spoke on *Some Practical Considerations in Fracture Dislocations of the Ankle*. Mr. Gus Kern assisted Doctor Bost in the demonstration. Illustrative charts depicting the various types of fractures, based on Ashhurst's classification, were displayed and typical types further clarified by x-ray films of actual cases before and after proper reduction. Principles of treatment were definitely and clearly given. The more recent nonpadded plaster cast application technique, according to Boehler's method, was demonstrated on an ankle model. Doctor Bost's talk was much appreciated.

KARL F. WEISS, *Secretary-Treasurer*.

CHANGES IN MEMBERSHIP

New Members (3)

Los Angeles County.—Calvin Albert Lauer.

San Diego County.—Albert Jumblatt.

San Francisco County.—Charles Fay Steiss.

Transferred (1)

Mabel Geddes, from Humboldt to Orange County.

In Memoriam

Frankenheimer, Jule B. Died at San Francisco, December 14, 1933, age 60. Graduate of Cooper Medical College, 1898, and licensed in California the same year. Doctor Frankenheimer was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.



Hunter, George Graham. Died at Los Angeles, December 13, 1933, age 57. Graduate of the University of California Medical School, San Francisco, 1906, and licensed in California the same year. Doctor Hunter was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.



McKinnon, George Washington. Died at Arcata, November 21, 1933, age 67. Graduate of McGill University Faculty of Medicine, Montreal, 1888. Licensed in California in 1889. Doctor McKinnon was a member of the Humboldt County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.



Wightman, William Dewey. Died at Los Angeles, December 6, 1933, age 35. Graduate of Northwestern University Medical School, Chicago, 1926, and licensed in California the same year. Doctor Wightman was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.



Wills, William Le Moyne. Died at San Marino, December 4, 1933, age 80. Graduate of the University of Pennsylvania School of Medicine, Philadelphia, 1882. Licensed in California in 1883. Doctor Wills was an honorary member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

OBITUARIES



George Graham Hunter

1876-1933

By the tragic death of Dr. George Graham Hunter on December 12, 1933, the Los Angeles County Medical Association and the California Medical Association lost a most outstanding and devoted member. In the councils of both organizations, Doctor Hunter's broad vision and sound judgment were most valuable and highly respected.

Scientific medicine, especially in neurology and psychiatry, likewise sustained a great loss. And the community and state will miss this most useful medical practitioner and civic worker.

Doctor Hunter was born in Illinois. At the age of twelve the family came to California. He attended the University of Southern California one year, but finished his college course at the University of California at Berkeley in 1903. He received the degree of Doctor of Medicine in 1906 from the same institution. In 1907 he came to Los Angeles to become associated with Dr. H. G. Brainerd and in due season became his partner.

Doctor Hunter held many positions of honor and trust in the medical organizations of the city, county, and state. He was past president of the Los Angeles County Medical Association, secretary-treasurer and past president of the Clinical and Pathological Society, past president of the Society of Psychiatry and Neurology, member of the Board of Councilors of the California Medical Association, Fellow of the American College of Physicians, member of the Psychopathic Association of California, member of the Insanity Commission of the state. He was a member of the staff of the Los Angeles General Hospital for twenty years, and served on the staff of St. Vincent's, Cedars of Lebanon, California and Santa Fe hospitals, as well as several private hospitals. He served for nine months as captain of the Medical Corps with Base Hospital No. 35 in France during the World War. In addition to all of this he found time for special study in the neurologic centers of Philadelphia, Boston, and Baltimore.

Your committee feels that the splendid and most worthy tribute paid to his memory by Dr. Carl S. Patten, pastor of the First Congregational Church in Los Angeles, at his funeral service so fittingly expresses the sentiments of the entire medical profession that they quote briefly from this address as follows:

"Words and names and outward professions mean little or nothing here. The question of the ancient prophet goes to the root of the matter: 'What doth the Lord require of thee but to do justly, to love mercy, and to walk humbly with thy God.' So Doctor Hunter did, and so he walked; seeking not his own

but the good of those who trusted so much to him, and in the steps and after the pattern of the Great Physician. I have not known a better Christian man.

"His attachments were deep and permanent. He gave his friendship without stint, and his love without recall. And what he thus gave was returned to him in fullest measure. He carried his family and his friends always in his heart. And what he was to those outside, that and vastly more he was to his own. One of his friends said of him: 'He wove himself into your life, so that having once known him you could not get along without him.' There is a motto that hung, and still hangs, in his house: 'If lives were measured by the joy we give, not by the years we chance to live, you, whose fine spirit helps and lifts and cheers so many of us, would live a thousand years.' And so he does live, and so he will live, among us, as long as we live."

WILLIAM DUFFIELD
EDWARD M. PALLETTE
CLARENCE G. TOLAND.



William Le Moyne Wills 1853-1933

Dr. William Le Moyne Wills died at his home, 2355 Monterey Road, San Marino, December 3, 1933, at the age of eighty years.

Doctor Wills, one of the prominent men in Los Angeles in 1887, received his literary education at Harvard and his medical education at the medical department of the University of Pennsylvania at Philadelphia, graduating there in 1882. His father was a retired lawyer, having a beautiful home on "Fort Hill," with magnificent grounds and gardens overlooking the Plaza—the old Mexican part of the city—the whole of what is now Lincoln Heights (then East Los Angeles) and the business district.

Doctor Wills was president of the Southern California Medical Society in 1890, president of the California Medical Association in 1896, and president of the Los Angeles County Medical Association in 1899.

He was one of the original members of the pioneer faculty of the medical department of the University of Southern California and held the chair of descriptive and surgical anatomy (taught anatomy eighteen years) until 1903 and then clinical surgery for the succeeding six years.

Doctor Wills was on the Board of Education from 1893 to 1897, and helped to lay the foundation for the nonpartisan Board of Education. He was also a member of the State Board of Health from 1903 until 1920, continuing on this board during these seventeen years at the request of leading members of the medical profession of Southern California. He received his first appointment by Governor George C. Pardee, and at the end of his regime Governor Pardee appointed Doctor Wills a member of the Sixth District Agricultural Board, which, by successful litigation, saved the Agricultural Park (now Exposition Park) for the State of California.

Doctor Wills's father and mother were instrumental in founding the Cremation Society of Southern California, and built the first crematory on the Pacific Coast at Rosedale Cemetery, in Los Angeles.

Doctor Wills had always taken an active interest in local politics with the aim of bettering local conditions. He was a great lover of horses and was one of the founders of the Amateur Driving Club, Los Angeles, which gave much pleasure to lovers of sport. He was one of the last doctors to give up the use of horses in his business.

Doctor Wills and his sister, Miss Wills, were prominent in founding the Children's Hospital in 1901. The General Bouton Home on Castelar Street, corner of Alpine, was purchased and used as the first building of the present Children's Hospital. For the first three years Doctor Wills was its chief surgeon.

C. M. A. DEPARTMENT OF PUBLIC RELATIONS*

State Medicine†

The term "state medicine" occurs with increasing frequency in medical literature and in conversations between medical men. It is used many times as if it conveyed one definite meaning.

A little conversation with doctors will soon bring out the fact that there is a variety of opinions as to what state medicine really is. As a result of this lack of uniformity of opinion some confusion has grown up concerning the whole idea.

One doctor I know has been accused of being willing to sponsor or support a movement alleged to be in the direction of state medicine, when the facts are the movement was inaugurated for the purpose of combating state medicine.

Some of this confusion of opinion is doing harm and should be cleared away. The term is not easy to define. There are many practices which one doctor may regard as state medicine and another not as state medicine. For example, organized medicine has sponsored the creation of state, county, and municipal departments of health for the purpose of carrying on certain medical activities in the interest of public health. These activities and practices constitute state medicine in a sense but they are not state medicine in another sense when their activities are kept within the proper bounds.

Organized medicine has sponsored the creation of municipal hospitals in which indigent patients receive free medical and hospital care. The plan, or system, under which these institutions operate varies. In some instances doctors who take care of patients receive remuneration. In others, the intern staff receives some remuneration, and the attending staff from the outside receives no pay whatever. When properly run such institutions are not engaged in state medicine, though they are financed by the government.

Medical organizations have sponsored the creation of tuberculosis hospitals which care for and treat tuberculosis patients free of charge, or at small cost. In most of these institutions the doctors in attendance are resident in the institution and devote their entire time to the care of such patients and draw a salary from the state, county, or municipality, as the case may be.

One might continue the enumeration of examples of medical activities on the part of the government which no one regards as state medicine, but the above will suffice to show that everyone recognizes that there are certain activities which are medical in nature which must be performed by the state or some unit of it. For the state or some unit of it to engage in a medical activity does not of itself constitute state medicine.

We propose the following as a definition: State medicine is a system of medical practice in which the physician renders services as an employee of the state and in which the patient has no voice in the selection of his physician and which practice places the physician so engaged in unfair competition with practitioners.

There are several elements in state medicine. In the first place an essential relationship between doctor and patient is destroyed. That is to say, the patient gives up his liberty of choosing his doctor and the doctor has no liberty in choosing his patient. The destruction of this relationship is of vital importance not only for the moment but for all times to come. It is the most destructive phase of the whole subject.

* An open forum for progress notes on the department's activities, and for brief discussions on medical economics. Correspondence and suggestions invited. Address Walter M. Dickie, Room 2039, Four Fifty Sutter Street, San Francisco. This column is conducted by the Director of the Department.

† Reprinted from the *Journal Tennessee Medical Association* (Aug.), 1933.

In the second place, an unethical practice is engaged in. It is unethical for the simple reason that it is unfair. Ethics is fairness. It is around this sense of fairness and sound good policy that the whole code of ethics is constructed.

From the examples cited it is obvious that it is possible for the state to render aid to sick people under such conditions and circumstances as not to constitute an unfair practice. For example, when a health department engages in activities which were never intended, it places the physicians of that department in direct and unfair competition with private physicians and they therefore become engaged in unethical and unfair practice. If a municipal hospital should inaugurate the practice of admitting and caring for patients who are not indigent then that institution would be engaging in unethical and unfair practice.

All these elements must be taken into consideration in determining whether or not a certain practice constitutes state medicine in the vicious form which organized medicine seeks to combat. There are two elements ordinarily which stand out. One is the destruction of freedom of both doctor and the patient, and the other element is the element of gross unfairness. As in the case of contract practice, elements which enter into the practice constitute the menacing feature. It is perfectly possible for a unit of the government to render medical service without violating ethical principles. When these institutions, however, engage in practices which are in violation of fundamental ethical principles then they become destructive to the best that is in people, in government, and the medical profession.

Medical activities on the part of the state become vicious and menacing state medicine when fundamental ethical principles are violated.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION*

Component County Auxiliaries

Alameda County.—The regular November meeting of the Woman's Auxiliary to the Alameda County Medical Association was held on Friday, November 17, 1933, at the Women's Athletic Club, Mrs. Charles A. Dukes, president, presiding.

The hostesses for the day were Mesdames Benjamin Black, George McClure, Nelson Keeler, and Albert Rowe.

Committee reports were heard from Mesdames William Sargent, Benjamin Black, Lloyd Kindall, Frank Baxter, Harold Trimball, Leonard Barnard, and Clarence DePuy.

New members announced were Mrs. G. W. Robinson, Mrs. Roesner Graham, and Mrs. Emery Ranker.

Officers and directors for 1934 were installed by the outgoing president, Mrs. Charles A. Dukes.

New officers are as follows: President, Mrs. William H. Sargent of Oakland; president-elect, Mrs. R. T. Sutherland of Oakland; first vice-president, Mrs. R. H. Smithies of Alameda; treasurer, Mrs. Carl Bowen of Oakland; recording secretary, Mrs. Harold Carpenter of Berkeley; corresponding secretary, Mrs. Ed Patterson of Oakland.

Directors: Mesdames Louis Dyke of Oakland, Harry Bell of Piedmont, A. W. Henry of San Leandro, Nelson Keeler of Piedmont, O. B. Jensen of Livermore, and Walter Dickie of Berkeley.

* As county auxiliaries to the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Thomas J. Clark, chairman of the Publicity and Publications Committee, 40 Ross Circle, Oakland. Brief reports of county auxiliary meetings will be welcomed by Mrs. Clark and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate one page in every issue for Woman's Auxiliary notes.

Mrs. George Bell read the very interesting and dramatic English play, *Services Rendered* by Somerset Maugham.

1 1 1

Contra Costa County.—The regular meeting of the Woman's Auxiliary to the Contra Costa Medical Association met at the home of Mrs. C. R. Blake. Reports on revision of the constitution were given by Mrs. W. Lucas.

A review of the book *100,000,000 Guinea Pigs* by Arthur Kallet and F. J. Schlink was given by Mrs. H. L. Carpenter.

Election of officers resulted as follows: President, Mrs. M. L. Fernandez of Pinole; first vice-president, Mrs. Kalso Dailey of Richmond; second vice-president, Mrs. M. C. Bolander of Danville; and secretary-treasurer, Mrs. S. N. Weil.

Bridge was enjoyed at the close of the meeting. Refreshments were served by the hostess. Installation will be held January 9, 1934.

LILLIAN M. BLAKE.

1 1 1

Los Angeles County.—The regular meeting of the Woman's Auxiliary to the Los Angeles County Medical Association was held on Tuesday, November 21, at the Ebell Club Solarium.

After the luncheon the following program was given:

Book Review: *Men Against Death*—Paul de Kruif. Review by Mrs. Richard Bailey; *Current Events*, by Mrs. Shiffbauer, chairman; and *New Developments in X-Ray and Radium*, by Dr. C. R. Dunleavy.

1 1 1

Orange County.—Responding with enthusiasm to the invitation of the Woman's Auxiliary of the Orange County Medical Association, 250 guests gathered at the home of Dr. and Mrs. H. A. Johnson of Anaheim on the afternoon of November 7 for a musicale, tea and fashion review that was put on for the benefit of the medical student scholarship fund.

In the receiving line greeting the guests were Mrs. C. S. O'Toole, president of the auxiliary, and Mrs. F. E. Coulter of Santa Ana, chairman of the Ways and Means Committee.

Special guests of honor for the occasion were Mrs. James Percy of Los Angeles, junior past president of the national auxiliary, and Mrs. Philip Doane of Pasadena, state president-elect. They were introduced by Mrs. O'Toole, and each responded with a brief talk in which they likened the local group to the crowning jewel in the state diadem.

Guest artists for the musicale were: Robert L. Brown, baritone, who was accompanied by Miss Ruth Armstrong; Margaret Gaebe Fletcher, reader; and Clarence Gustlin, pianist. The fashion show presented showed the latest trend in styles at the present time.

Following the program the members and guests gathered around the tea tables for a social hour.

1 1 1

Riverside County.—Women of the auxiliary to the Riverside County Medical Society held their monthly meeting Monday evening at the Community Hospital. Hostesses for the evening were: Mrs. C. Van Zwahlenburg, Mrs. B. E. Garrison, and Mrs. R. M. Smith.

Dr. Bon O. Adams was the speaker for the evening, taking as his subject *Quacks and Quackery*. Mrs. A. W. Walker, president, presided at the meeting, which was attended by about twenty women. Refreshments were served by the hostesses at the close of the program.

1 1 1

Sacramento County.—The regular meeting of the Woman's Auxiliary to the Sacramento Society for Medical Improvement was held Tuesday evening, November 16, 1933, at the home of Mrs. Burt Howard, 1224 Fortieth Street.

A short business meeting was held with the president, Mrs. Scatena, presiding. Nominations for officers

for 1934 were made, to be voted on at the next meeting. A contribution was voted to be made to the Braille system for the blind, which is carried on by contributions made to the *Readers' Digest*. Two new members were present and introduced: Mrs. Charles Vanina and Mrs. Anthony Boscoe, both of Sacramento.

In honor of our state president, Mrs. A. H. Henderson, community singing was enjoyed and taken part in by all. The Misses Jean and Bonnie Briar accompanied and also led the singing. After the singing the Misses Briar entertained with musical selections.

Mrs. Orrin Cook gave a travelogue, which was extremely interesting and much enjoyed.

After completion of the business meeting and program, Mrs. Howard, assisted by Mesdames E. T. Rulison, Charles Von Geldern, Clarence Bittner, George Foster, and E. Sevier, served refreshments.

MRS. FRANK P. BRENDEN,
Corresponding Secretary.

1 1 1

Santa Barbara County.—The Woman's Auxiliary to the Santa Barbara County Medical Society met at the home of Mrs. John Van Paing, 1334 Alameda Padre Serra, Friday afternoon at 3 o'clock, November 24. The meeting was called to order by the president, Mrs. Van Paing.

The following names for 1934 officers were presented by the Nominating Committee (comprised of Mrs. Charles Stevens, Mrs. H. J. Profant, and Mrs. A. Q. Spaulding): President, Mrs. John Van Paing; vice-president, Mrs. Horace Pierce; secretary, Mrs. W. Remfry Hunt; and treasurer, Mrs. Alfred B. Wilcox.

Since afternoon meetings apparently have been preferred to the customary Monday night meetings, Mrs. Van Paing asked for an expression of opinion for our future policy regarding these meetings. Mrs. Wilcox moved to have the meeting take place in the afternoon. Mrs. Pierce seconded the motion. Carried.

Some time was given to discussion of a plan by which members, in alphabetical order, could be asked to lend their homes for meetings. Mrs. Mellinger suggested that the hostess be relieved of the refreshment problem, this to be arranged by a special committee. The plan appeared to meet with general approval.

Some work was done in tying and binding quilts for the Red Cross.

Those present were favored by an extremely lucid talk by Dr. Ina M. Richter on *The Heart Child*, with emphasis on classification according to type of heart disease and its prognosis.

Tea was served, Mrs. Mark Thaler and Mrs. Lamb presiding at the tea and coffee urns.

MABEL HUNT, *Secretary.*

NEVADA STATE MEDICAL ASSOCIATION

D. A. SMITH, Mina	President
E. E. HAMER, Carson City.....	President-Elect
J. N. VAN METER, Las Vegas	First Vice-President
W. H. FROLICH, East Ely	Second Vice-President
HORACE J. BROWN, Reno.....	Secretary-Treasurer

COMPONENT COUNTY MEDICAL SOCIETIES

CLARK COUNTY

The Clark County Medical Society met at the Sal Sagio Hotel, Las Vegas, at 8 p. m. on December 12, 1933.

Dr. John M. Flude, field representative of the American Society for the Control of Cancer, presented the plans that organization has perfected and hopes to introduce into the Nevada State Society.

Dr. Norman J. Kilbourne of Los Angeles then read a paper entitled *Comparison of Operative and Injection Treatment of Hemorrhoids*—a review of sixty-two thousand cases, with lantern slides illustrating various conditions and operative technique.

New officers elected for the ensuing year were: President, Dr. J. N. Van Meter; vice-president, Dr. R. D. Balcom; and secretary, Dr. C. W. Woodbury.
J. N. VAN METER, *Secretary.*

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WASHOE COUNTY

The annual meeting of the Washoe County Medical Society was held in the banquet room of the Hotel Riverside, Reno, Tuesday at 8 p. m. on December 12, 1933.

A heavy downpour of rain, such as is seldom witnessed, prevented many from coming out; however, the members gathered for the sake of a fraternal get-together meeting. There was no set program. There was a very happy feeling existing and a social fellowship enjoyed, feeling that there was a relief from any restraint which might otherwise mar the pleasure of the occasion.

Thirty-three active busy practitioners of medicine, surgery, radiology, bacteriology, and pathology decided that they would bid Old Man Gloom and his partner, Old Doc Lugubrious Blue, the air and told them very emphatically, in words and song and libations, that they were through with the pair, and for them not to come again.

In common with all practitioners the country over, the medical man has done more than his share of work for the distressed poor. The Government seems to have all kinds of relief agencies with the heads of the departments well paid; but even so, the humble disciples of Esculapius have never turned a deaf ear to the appeals of the poor. Thus they have sustained all over this broad land the noble principles of our profession, similar to Cincinnatus, the old Roman, whose emblem was the plough and the altar, ready for service or sacrifice. It may be true that occasionally some exceptional man who calls himself a physician may have entered the profession solely for the purpose of a gainful occupation, but we feel satisfied that, with over 150,000 physicians today in the United States, the preponderating majority of these earnest men and women are laboring in a true and better cause, and that for the betterment of humanity. As our little band of Reno physicians and those of our confrères from neighboring towns gathered about the festive board, there were no indications of bickerings or jealousy; all formalities were dropped. In our district all know one another by their given names.

With this happy feeling prevailing, the annual report of the secretary-treasurer was read and approved by the president and the censors.

The election of officers resulted as follows: President, Dr. H. A. Paradis; vice-president, Dr. George H. Smith, superintendent of the Nevada Mental Hospital; secretary-treasurer, Dr. Thomas W. Bath, re-elected the seventh year in succession; censor, Dr. Frank L. Samuels.

Votes of good wishes were signified by the society for Doctors Horace J. Brown and M. A. Robison, both of whom were recovering from serious illnesses. There being no further business, the society adjourned.

THOMAS W. BATH, *Secretary.*

Nutrition and Food Elements.—Within the past few years the attention of the general public has been focused upon food and foodstuffs and nutrition in general to a remarkable degree. Many persons bearing the self-conferred designation of "Nutritionist," with limited knowledge of the subject, have been urging upon the public the inclusion or exclusion of various important articles of diet. Many of these food faddists have a sincere conviction that it is their duty to save mankind from himself as relates to the ills produced by improper diet and other evils. Others, with a more mercenary interest, are offering for sale some articles alleged to contain the food elements necessary for the proper maintenance of health. Most of these persons, many of whom are sincere but misguided, seem to have a one-sided viewpoint of the broad question of nutrition and food.—Surgeon General H. S. Cumming.

MISCELLANY

Under this department are ordinarily grouped: News; Medical Economics; Correspondence; Twenty-five Years Ago column; Department of Public Health; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings.

American Medical Association, Cleveland, Ohio, June 11 to 15, 1934. Olin West, M. D., Secretary, 535 North Dearborn Street, Chicago, Illinois.

California Medical Association, Riverside, April 30 to May 3, 1934. Emma W. Pope, M. D., Secretary, 2004 Four Fifty Sutter, San Francisco.

California-Nevada Section of American College of Surgeons, Los Angeles, March 12 and 13, 1934. Detailed announcements will appear in February issue.

Clinical Congress of the American College of Surgeons, Boston, October, 15 to 19, 1934. Franklin H. Martin, M. D., Director General, 40 East Erie Street, Chicago, Illinois.

Medical Broadcasts.*

American Medical Association Health Talks.—The American Medical Association broadcasts each Monday afternoon from 1:30 to 1:45 Eastern Standard Time (12:30, Central Standard Time), over Station WBBM (770 kilocycles, or 389.4 meters).

There is also a fifteen-minute talk, sponsored by the Association, on Saturday mornings from 9:45 to 10 o'clock, Central Standard Time, over Station WBBM.

‘ ‘ ‘

San Francisco County Medical Society.—The San Francisco County Medical Society broadcast program for the month of January is as follows:

Tuesday, January 2—KJBS, 11:15 a. m., and KFRC, 1:35 p. m. Subject: The Care and Treatment of Crossed Eyes.

Tuesday, January 9—KJBS, 11:15 a. m., and KFRC, 1:35 p. m. Subject: The Romance of Vaccination.

Tuesday, January 16—KJBS, 11:15 a. m., and KFRC, 1:35 p. m. Subject: Some High Spots in Fifty Years of Medical Progress.

Tuesday, January 23—KJBS, 11:15 a. m., and KFRC, 1:35 p. m. Subject: The Unseen World.

Tuesday, January 30—KJBS, 11:15 a. m., and KFRC, 1:35 p. m. Subject: The International Control of Disease.

‘ ‘ ‘

Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of January is as follows:

Tuesday, January 2—KECA, 11:15 a. m. Subject: Health Talk.

Friday, January 5—KFAC, 9:15 a. m. Subject: Your Doctor and You.

Saturday, January 6—KFI, 9:15 a. m. Subject: Health Talk.

Tuesday, January 9—KECA, 11:15 a. m. Subject: Health Talk.

Friday, January 12—KFAC, 9:15 a. m. Subject: Your Doctor and You.

Saturday, January 13—KFI, 9:15 a. m. Subject: Health Talk.

Tuesday, January 16—KECA, 11:15 a. m. Subject: Health Talk.

Friday, January 19—KFAC, 9:15 a. m. Subject: Your Doctor and You.

* County societies giving medical broadcasts are requested to send information as soon as arranged (giving station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

Saturday, January 20—KFI, 9:15 a. m. Subject: Health Talk.

Tuesday, January 23—KECA, 11:15 a. m. Subject: Health Talk.

Friday, January 26—KFAC, 9:15 a. m. Subject: Your Doctor and You.

Saturday, January 27—KFI, 9:15 a. m. Subject: Health Talk.

Tuesday, January 30—KECA, 11:15 a. m. Subject: Health Talk.

Fifth Pan-American Medical Association Meeting a Floating Congress.—At a meeting of the officers and trustees of the Pan-American Medical Association, convened by Dr. John Oliver MacReynolds on December 6, 1933, in Dallas, Texas, it was resolved to hold the fifth congress of the association in the month of March at the city of Caracas, Venezuela.

The congress will be divided into two parts: the first part, a floating congress, sailing from New York on the United States liner *Pennsylvania*, with a capacity for six hundred passengers, and the second part, scientific and social meetings convened at Caracas, Venezuela. Papers will be presented and discussed both on board and in Venezuela. The official languages of the association are Spanish, French, Portuguese, and English. The cost of the entire trip will be \$195 up; and the time, from March 14 to March 30.

Itinerary of steamship *Pennsylvania* cruise:

Wednesday, March 14—Sail from New York at 12 noon.

Saturday, March 17—Arrive at Havana at 8 a. m. Leave Havana at 10 p. m.

Tuesday, March 20—Arrive at Colon at 7 a. m. Leave Colon at 8 p. m.

Wednesday, March 21—Arrive at Cartagena at 12 noon. Leave Cartagena at 5 p. m.

Friday, March 23—Arrive at La Guaira at 6 a. m., and train or motor to Caracas.

Saturday, March 24—Leave Caracas at 10 a. m., motor to Maracay and then to Puerto Cabello. Leave Puerto Cabello at 5 p. m.

Monday, March 26—Arrive at San Juan at 6 a. m. Leave San Juan at 5 p. m.

Friday, March 30—Arrive at New York at 7 a. m.

This congress affords an excellent opportunity to visit the Latin-American countries and to meet the leading medical men of the twenty-two countries making up the Western Hemisphere. One can well profit by hearing them speak before the various sections, which will all be well represented.

The congress is sponsored by the Venezuelan Government. The visiting doctors will be very hospitably treated and they will be afforded an opportunity of visiting the countries included in the cruise in a more intimate manner than is ordinarily accomplished. The chartering of the Atlantic liner steamship *Pennsylvania* has reduced the cost of the cruise to a very low price. The congress and cruise is open to members and families of the San Francisco and Los Angeles chapters of the Pan-American Medical Association, to the medical men of California in good standing, and to a limited number of sponsored lay friends. Any physician interested in attending this congress can receive additional information by communicating with Dr. Charles P. Mathé, 450 Sutter Street, San Francisco.

Fifty-Second Course of Popular Medical Lectures Given by Stanford University School of Medicine.—The Stanford University School of Medicine announces the fifty-second course of popular medical lectures



View of the new Acute Unit of the Los Angeles County General Hospital. See also editorial comment on page 58. (The maternity wards, on the eighth floor, were installed on December 12, 1933.)

(illustrated) to be given at Lane Hall on alternate Friday evenings at 8 p. m. sharp. The following program has been scheduled:

January 12—The Organization of Medical and Surgical Emergencies in San Francisco, Edmund Butler, M. D.

January 26—Medicine in Community Service, President Ray Lyman Wilbur.

February 9—Relation of Diet to Health, Agnes Fay Morgan, Ph. D.

February 23—Occupational Therapy, Mary C. Rixford, O. T. Reg.

March 9—The Rôle of Psychiatry in Preventive Medicine, George S. Johnson, M. D.

March 23—Some Contributions of Medical Science to Our Knowledge of Pain, Joseph C. Hinsey, Ph. D.

City Maternity Service at Los Angeles Transferred to County.—For several months there has been a considerable discussion in the Los Angeles County press regarding an out-patient maternity service, which for some years has been maintained as one of the activities of the Health Department of the City of Los Angeles. In these strenuous financial times the city of Los Angeles having felt itself unable to maintain this activity, has sought to have the county of Los Angeles assume the financial burden therefor. Pertinent thereto are the excerpts below from the daily press of December 21, 1933, detailing the final decision thereon:

"Maternity service for needy mothers, hitherto provided through the city health department, recently became a county charge.

"The Board of Supervisors appropriated \$1,700 to carry the extra case load at the General Hospital for the next sixty days, and announced arrangements were being made to provide prenatal and postnatal care for women eligible under county aid requirements.

"Actual hospital care at the time of delivery will be available to all indigent mothers, the requirements as to residence and other details being followed only in the case of treatment given outside the hospital.

"The headquarters at 225 North Main Street will be kept open until final arrangements are made to install a new system of handling the work.

"It is not planned that the present medical and nursing staff of the maternity service will be retained in county work, but additional doctors and nurses will probably be employed through the General Hospital to do the extra work given the hospital through the anticipated influx of maternity cases.

"Because the maternity wards in the new General Hospital unit are already nearly filled to capacity, it will be necessary to send overflow cases to contract hospitals where the county will pay the costs.

"The social service and welfare departments of the county organization will assist in checking on applicants and determining their need, it was announced.

"As a group, and individually, the County Supervisors declared that they were anxious to keep the maternity service functioning and that everything possible would be done to assure adequate aid for expectant mothers who need help."

Nineteen Thirty-Four Herzstein Lecturer Is Dr. Herbert M. Evans.—Dr. Herbert M. Evans, professor of anatomy in the University of California, will give the fourth course of the Morris Herzstein lectures.

The lectures, under the provisions of the will of the late Dr. Morris Herzstein of San Francisco, are held under the auspices of the two universities, and this year will be given at the San Francisco County Medical Society, 2180 Washington Street, January 29, 31, and February 2, at 8:15 p. m.

Doctor Evans, who is also Morris Herzstein professor of biology and director of the Institute of Experimental Biology in the University of California, will speak on "The Internal Secretions of the Anterior Lobe of the Pituitary Gland," illustrating his lectures with slides and charts. The lectures are open to the general public as well as to the medical profession, states Dean Porter, and practitioners, medical students, and the lay public are cordially invited to attend.

Under the terms of his will, Doctor Herzstein left a bequest of \$20,000 to the two universities for the purpose of presenting annual lectures by outstanding authorities in medical science from all parts of the world. The first series of Herzstein lectures were given by Dr. L. A. Orbelli, professor of physiology at the Medical Institute of Leningrad; the second, by Dr. Charles Singer, lecturer in the history of medicine, University of London; and the third series by Dr. Philip Anderson Saffer, professor of biological chemistry, Washington University School of Medicine, St. Louis.

Radiological Cancer Conference.—The Section on Radiology, in joint meeting with the Los Angeles County Medical Association, is conducting a diagnostic conference at the Elks Club in Los Angeles on

Wednesday, January 24. The conference will begin at 2 p. m. and continue throughout the afternoon and evening, with a two-hour intermission at 5:30 p. m. for dinner, which will be served at the club.

The plan of procedure at this conference will be similar to the one conducted at the Del Monte meeting last spring. Each participant will present one or two case histories, paying special attention to the patient's complaint, physical findings, laboratory data, and x-ray films. As soon as this has been done, each member will write out an unsigned diagnosis. The discussion then continues with biopsy, operative, or autopsy findings, and the "straw vote diagnosis" is checked against the final diagnosis. One session will be devoted to the general aspects of radiological diagnostic procedures, while the other will be centered on the problems involved in abdominal conditions.

The meeting is open to all members of the profession.

The following men will present cases for discussion: Doctors Lowell S. Goin, Henry Snure, Kenneth Davis, Lyell C. Kinney, John W. Crossan, Ray Taylor, C. W. McClanahan, Milton Geymann, and Karl Bonoff.

California One of Great Centers for Tropical Medicine.—California, and particularly San Francisco, is looked upon as one of the three great centers for the study of tropical diseases in the United States, ranking with New York, and New Orleans.

This fact was learned recently in a communication from Dr. A. C. Reed, director of the University of California Institute of Tropical Medicine, who is en route from New York to San Francisco, after attending a number of medical meetings and visiting southern and eastern universities where tropical medicine is important.

In Richmond, Virginia, he attended the joint meeting of the American Society of Tropical Medicine and the Southern Medical Association. He read two papers on amebiasis and its treatment, and one paper written by Doctors Anderson and Wagner of the University of California staff on a new approach to the treatment of leprosy. Doctor Reed was also reelected a councilor of the American Society of Tropical Medicine.

Following this meeting, November 15 to 18, 1933, Doctor Reed visited Columbia and Cornell universities, to inspect tropical medicine research, and then went to Chicago at the invitation of Dr. Herbert Bundesen, president of the board of health, to consult on an epidemic of amebic dysentery in that city.

San Francisco Heart Committee.—The Heart Committee of the San Francisco County Medical Society held its fourth annual postgraduate symposium on heart disease November 22 and 23, 1933, in half-day sessions at the San Francisco, Stanford University and University of California Hospitals, and at the Department of Public Health. The program was arranged by Doctors William Dock, Jacques Gray, William J. Kerr and J. Marion Read, assisted by the Committee on Education and Publicity, of which Dr. John P. Strickler is chairman. There was a total attendance of 665, and fifty-five cities of California were represented. The following subjects were discussed:

Physiologic and Anatomic Backgrounds in Arterial Tension. By J. Marion Read, M. D.

Essential Hypertension. By Carol McKenney, M. D.
Therapy of Arterial Hypertension. By Edwin L. Bruck, M. D.

X-Ray Demonstration of Calcified Heart Valves, and Diagnosis of Valvular Heart Disease by X-Ray. By L. Henry Garland, M. D.

Demonstration of Heart Preparations. By Leonard W. Buck, M. D., and Jesse L. Carr, M. D.

Presentation of Cases of Hypertension. By Raymond J. Reitzel, M. D.

Restoration and Normal Mechanism in Auricular Fibrillation. By Garnett Cheney, M. D.

Effort as a Precipitating Factor of Acute Coronary Occlusion. By William W. Newman, M. D.

Management of the Decompensated Cardiac. By Arthur Bloomfield, M. D.

Clinical Features of Heart-Block. By J. K. Lewis, M. D.

Circulatory Failure from Infections or Operations. By William Dock, M. D.

Clinic on Congenital Heart Disease. By Amos Christie, M. D.

Symptomatic Interrelations of Heart and Abdomen, with Demonstration of Patients. By Eugene S. Kilgore, M. D.

Clinic on Types of Murmurs and Their Significance, with Stethophone Demonstration. By William J. Kerr, M. D.

Problem of Heart Disease in the City and County of San Francisco. By J. C. Geiger, M. D.

Problems Relating to the Cardiac School Child. By John J. Sampson, M. D.

Notes on the Cardiac Morbidity Survey in San Francisco. By Jacques P. Gray, M. D.

Heart Disease a Public Health Problem. By Walter H. Brown, M. D.

The annual meeting and election of officers of the Heart Committee was held November 23, 1933, at the San Francisco County Medical Society. The newly elected officers of the Heart Committee for 1934 are: Gordon E. Hein, chairman; John J. Sampson, vice-chairman; J. Marion Read, secretary.

Following the business meeting, Dr. Emile F. Holman discussed the present status of cardiac surgery. This was followed by a clinical pathological conference, conducted by Doctors Jesse L. Carr and David A. Wood.

Fair Dates Listed for Year 1934.—Dates of twenty-seven fairs and fiestas to be held in California during 1934 were set at the annual meeting of the Western Fairs Association in San Francisco.

The association elected Edward G. Follman of Stockton its new president; W. Coburn Cook of Turlock vice-president; and Charles W. Paine of Sacramento, secretary.

The 1934 fair and outing schedule, as given by the Los Angeles *Examiner*, follows:

Pasadena Rose Tournament, January 1; National Orange and Horse Show, San Bernardino, February 16-25; Imperial Midwinter Fair, Imperial, March 3-11; Santa Rosa Rose Show, May 14-19; Fiesta de Las Rosas, San Jose, May 28 to June 2; Visalia Rodeo, June 2-3; Livermore Rodeo, June 9-10; Sonoma Rodeo, June 3; San Leandro Cherry Festival, June 4-9; Russian River Fiesta, Healdsburg, June 20-22; World's Largest Outdoor Card Party, Ripon, July 21; California Rodeo and Salinas Big Week, July 27-29; Coronado National Horse Show, July 28 to August 4; Turlock Melon Festival, August 6-11; Santa Barbara County Fair, Santa Maria, August 10-12; Humboldt County Fair, Ferndale, tentatively set for second week in August; San Mateo Horse show, August 11-18; San Joaquin County Fair, Stockton, August 20-26; San Leandro Dahlia Show, August 21-26; San Benito County Horse Show, Bolanda Park, August 24-26; Old Spanish Days Fiesta, Santa Barbara, August 23-25; California State Fair, Sacramento, September 1-10; Merced Roundup, September 15-16 (tentative); Tulare County Fair, September 18-22; Shasta County Fair, Anderson, September 20-22; Los Angeles County Fair, Pomona, undecided; Pacific Slope Dairy Show, Oakland, November 5-11.

CORRESPONDENCE

Subject of following letter: A letter to California and Western Medicine from the American Red Cross.

To the Editor:—Thank you so much for the generous contribution of space which was given to the American Red Cross in CALIFORNIA AND WESTERN MEDICINE. In thus aiding us in extending a universal invitation to participate in Red Cross work through individual membership, you made a most substantial contribution to our membership roll call.

Please allow me to express to CALIFORNIA AND WESTERN MEDICINE, in behalf of our national officers and leaders of our 3,700 Red Cross chapters, sincere appreciation for your generous coöperation.

Cordially yours,

DOUGLAS GRIESEMER,
Director of Roll Call.

TWENTY-FIVE YEARS AGO *

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. VII, No. 12, January, 1909

From Some Editorial Notes:

Volume Seven.—And here beginneth the seventh volume of *your journal*; and, incidentally, about this time there also beginneth another session of the legislature. But more of that anon. Let us, for a moment, think only of pleasant things. The journal was born out of the chaos of a reorganization of the state society into a very troublous world. After a breathless—though bloodless—conflict of some years, the angel of peace seemed about to hover over the abiding place of the journal, when lo! on a sudden it all went up in smoke together with several other pieces of personal property in San Francisco. Then the strenuous life was resumed. . . .

‘ ‘ ‘

Our Law.—We may truthfully refer to the law regulating the practice of medicine as “our law” for two reasons. It not only regulates the manner in which physicians may gain permission to practice in California, but it had its very origin with the members of our profession. . . . Because the better class of physicians have everywhere recognized their full duty to the people, they have striven to secure the enactment of proper medical laws which will and do, in large measure, prevent unscrupulous and unqualified doctors from practicing their partly gained profession and preying upon the public. The better element in the medical profession in this state secured the passage of the law of 1876, and for a quarter of a century fought to retain it. The same sort of movement occurred when the law of 1901 was secured, and again with that of 1907; it was and is the fight of the upright and honest members of our own profession to secure adequate protection to the public against the small, dishonest element which, for its own base purposes, desires to extend little or no protection to the ignorant sick. And so it has been in every State in the Union. . . .

‘ ‘ ‘

Sane Views.—So much awful piffle has been written on the “sexual life” and the “sexual question” and the so-called “social evil” (as though there were but one only social evil!) that it is distinctly refreshing to find an author expressing views that are based on plain, ordinary common sense. . . .

‘ ‘ ‘

Small Places Do Great Things.—It is not always the large community that sets the example in doing things. Elsewhere is the report of a meeting of the Placer County Society in which is given a résumé of the work of stamping out malaria in Auburn. It is a sermon in a very few words and one which we should take to heart. . . .

Pacific Association of Railway Surgeons—Excerpt from Official Minutes.—The Pacific Association of Railway Surgeons first effected a permanent organization in Santa Barbara, California, on April 21, 1903. The State Medical Society was holding its convention at the time, and as many of its members were railway surgeons they deemed it an opportune time to form an association of railway surgeons. . . .

The sixth annual meeting of the Pacific Association of Railway Surgeons was held in San Francisco, August 28 and 29. Meeting called to order by the president, Dr. J. R. Colburn, at 2:15 p. m. . . .

* This column strives to mirror the work and aims of colleagues who bore the brunt of society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

(Continued in Advertising Section, Page 14)

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA *

By CHARLES B. PINKHAM, M. D.

Secretary-Treasurer

News Items, January, 1934

Revival of an old-time narcotic racket, with licensed physicians as victims, was revealed by the recent arrest of Clarence Donley (Clarence Donnelly, alias Clarence Doole), asserted addict, found in possession of what purported to be a permit issued under the State Poison Law authorizing doctors to give him prescriptions for narcotics. Also found in his possession were one hundred and thirty \$1 bills, which indicated the possibility that he was engaged in peddling. Investigation revealed that several prominent doctors of Pasadena and Long Beach had violated both the state and federal narcotic regulations by prescribing for this addict, there being no such thing as a permit authorizing any physician to prescribe narcotics for an addict, unless after examination he has been found to be suffering from some pathology which warrants his use of said narcotics.

—

The “hospital association” racket is daily becoming more burdensome to the Board of Medical Examiners. Contracts are being sold throughout the state, the holders thereof in many instances complaining that they cannot obtain the promised professional service for which they paid. There is no state or municipal agency that has jurisdiction over the “fly by night” so-called “hospital associations,” and regulatory legislation is sadly needed as a protection against the petty larceny methods of some of those engaged in this racket.

—

According to an editorial in the San Francisco *Wasp-News Letter* of November 25, 1933, the fortune tellers, sorcerers, necromancers, wizards, and other thaumaturgists have decided to ordain themselves as bishops so as to evade alike the “snares” of the State Medical Board and the “peculations” of the Los Angeles tax collector. “In the case of a modern Los Angeles prophet-bishop, or sorcerer-bishop, the clients constitute the flock; the clientele is the diocese. With no strenuous or expressed opposition from client or clientele, the bishop can ordain himself. . . . When a prophet or sorcerer-bishop hangs out his shingle in the City of the Angels, he is entitled to all the benefits of clergy which locally his episcopal rank entails, including missionary rates on railways and steamships, and so forth—and to be especially exempt from attack or persecution at the hands of the medical profession. Therefore, we commend, for what it may be worth, to our sorcerers, fortune tellers, and other similar operators in the San Francisco Bay region, the plan of transforming themselves into bishops which has been so felicitously adopted by their colleagues, the miracle workers of Los Angeles.”

—

Commenting on the number of medical school graduates who pass the examination for a license to practice in this state as compared with the large number of failures at the bar examination, Chester H. Rowell, in the San Francisco *Chronicle* of November 15, 1933, makes a comparative statement as to the educational demands for admission to an examination for a license to practice medicine and the far inferior educational standard required of those seeking a license to practice law. This, Mr. Rowell states, accounts for the difference in examination results between applicants seeking the right to practice the respective professions mentioned.

* The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.

(Continued in Advertising Section, Page 17)

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In texture, in burning quality, in purity, it is as good as money can buy.

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Doctor: Send your next patient here, and you may feel assured not only that he will receive maximum benefit from his sojourn, but he will be grateful and will thank you for sending him to

**SOUTHERN SIERRAS
SANATORIUM**

(Continued from Page 31)

want of space. The report, however, directs attention also to conditions and diseases diminishing personal resistance to infection which lie at the root of the whole tuberculosis problem. The importance of fatigue or exhaustion cannot easily be exaggerated, nor the great importance of proper nutrition or, in other words, the relation of poverty to tuberculosis of the pulmonary type. The report brings out the fact that the increasing sobriety of the population of England and Wales has brought about increased disease resistance and diminished the susceptibility to tuberculosis. Other disease factors such as insanity, influenza, diabetes, syphilis, cirrhosis of the liver, and acute infectious diseases of infancy, are all dealt with to good advantage.

A similar report on the tuberculosis situation in the United States at the present time would make a valuable contribution to our knowledge and a clearer reali-

zation of the new conceptions of bringing about deliberately a still further material reduction in the prevailing rate for tuberculosis. That this can be done goes without saying, but the struggle for control is becoming more difficult as the remnant of the disease requires attention. As to this it may be said that the industrial aspects of tuberculosis are coming more and more to the foreground, particularly as regards the relation of pulmonary tuberculosis to silicosis which of late years has been attacked with increasing vigor and higher intelligence than ever before.

Finally it may be pointed out that immense progress has been made in the early diagnosis of pulmonary tuberculosis although much yet remains to perfect existing methods. Patients, unfortunately, too often delay treatment until the hopeless stage of the disease has been reached, and public sanatoria everywhere are overflowing with cases in a more or less moribund condition. Sanatorium treatment has proved its enor-

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and Diseases of the Chest.



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mous value not only as regards immediate effects on the patient, but also as regards improved conceptions of healthful modes of life after discharge which lie at the root of the treatment problem.

A cure of tuberculosis is being effected to an increasing extent. I quote a single statement from the English report to the effect that of the male patients admitted in the most hopeful stage of the disease, 65.5 per cent were alive at the end of ten years; of those admitted in the moderately advanced stage, 38.2 per cent were alive; and of those admitted in a far-advanced stage, 10.4 per cent were alive at the end of ten years. For females the corresponding figures were 85.2 per cent in the first stage, 49.7 per cent in the moderately advanced stage, and 10.8 per cent in the far-advanced stage.

Intestinal Disorders Among Recent Exposition Visitors Should Be Reported.—An outbreak of amebic dysentery among patrons of several hotels and restaurants in Chicago has been discovered by the health authorities of that city, according to information received from Herman N. Bundesen, M. D., president of the Chicago Board of Health. The reports indicate that the infection has been carried to many points throughout the country. The cases have not been generally recognized as amebic dysentery and some patients have even been operated upon for appendicitis or ulcerative colitis with unfortunate results.

Physicians and health officers of New York State are asked to be on the alert for any cases of this disease in persons who have been in Chicago during the past three weeks.

Amebic dysentery is a communicable disease and as such must be reported by the attending physician to the local health officer within twenty-four hours from the time the case is first seen by him, as required by the Sanitary Code. The health officer in turn must report the case promptly to the New York State De-

partment of Health. Specimens should be submitted to a nearby laboratory which has received approval, or if local laboratory service is unavailable physicians should communicate with the laboratory of the State Department of Health to secure advice.

Reports should state whether the patient has been in Chicago recently and, if so, the names of hotels or eating places visited by him in order that the Department may aid the Chicago health authorities in locating the probable sources of the infection.—*Health News*.

Eat That You May Have Something to Eat With.*

On the basis of scientific investigation, we can no longer get away from the fact that what we eat determines to a considerable extent what we have to eat with—the teeth. For this reason, members of the dental profession are laying more emphasis than ever before upon the supervision and balance of their patients' diets, in order to stem, if possible, the rising tide of dental disease. And since dental disease is so widespread, affecting more than one hundred million persons in the United States, it is well worth while to listen to what the modern dentist has to say about diet and its relation to health in the mouth and health in the body.

Regulation of the diet serves two purposes. First, it can do much to maintain strong teeth, free from disease, in the adult's mouth. Secondly, it determines largely the character and quality of children's teeth, thus becoming an agent for the actual prevention of disease. Dietary control, to be effective as a preventive measure, must go back before birth to the period of pregnancy. It must be continued faithfully throughout the years of growth and development, that is, up to eighteen years. Supervision of the diet gives good

* By Leroy M. S. Miner, D. M. D., M. D., dean of the Harvard University Dental School.

(Continued on Next Page)



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December 30th, 1933

Assets.....\$159,104,590.29
Capital, Surplus and Reserves.....\$6,650,000.00

The following accounts stand on our Books at \$1.00 each, viz.:

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Other Real Estate - - - - (Present Value \$635,650.00)
Pension Fund - - - - - (Present Value \$721,847.18)

MISSION BRANCH.....Mission and 21st Streets
PARK-PRESIDIO BRANCH.....Clement St. and 7th Ave.
HAIGHT STREET BRANCH.....Haight and Belvedere Streets
WEST PORTAL BRANCH.....West Portal Ave. and Ulloa St.

(Continued from Preceding Page)

assurance of strong healthy teeth in the growing youngster, and it is in the prevention of disease that we are most interested today.

From this standpoint the child's nutritional background has two aspects: before and after birth. Before birth the expectant mother's diet largely determines the quality of the baby's first teeth, for the calcification or hardening of the temporary dentition begins in the fifth week of pregnancy and is practically completed when the baby is born. The baby's own diet during infancy and childhood determines largely the quality of his permanent teeth. The first permanent

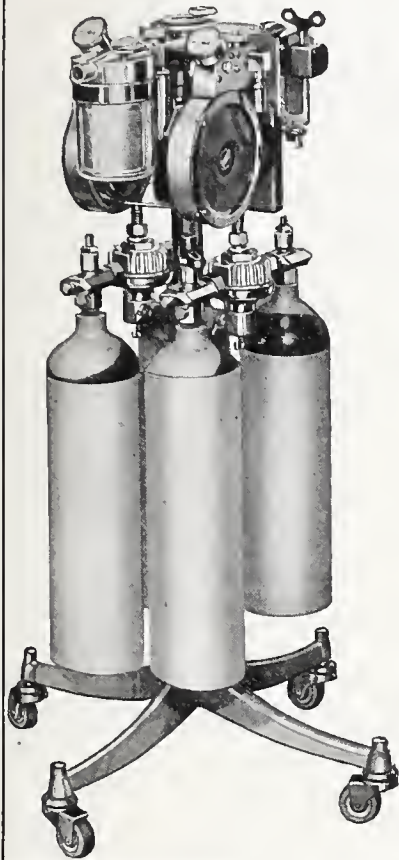
tooth, called the six-year molar because it appears in the sixth year, starts to calcify at birth, and this process of calcification of the remaining teeth continues until all the permanent ones are in place at the age of eighteen or twenty years. During pregnancy and afterward, both mother and child are naturally under the care of an obstetrician or pediatrician who exercises control over their diets and determines the details. But from the dentist's standpoint there are certain fundamental dietary needs of the body which must be met, if oral health is to be maintained in the mother or insured for the child.

To understand the essentials of a sound diet, it is first necessary to know something of the different types of foods and their particular uses in nourishing the body. These classes are as follows:

1. Proteins—for general growth, muscles, and the repair of tissues.
2. Carbohydrates and fats—for the body's activities or energies.
3. Iron—for good red blood.
4. Calcium and phosphorus—for firm, strongly built bones and teeth.
5. Other minerals and the vitamins—for health, growth, and protection against disease.

Now the interesting fact about our modern civilized American diets is that, while proteins, carbohydrates, fats and iron are generally found in adequate quantities for the body's needs, shortages or deficiencies to a greater or lesser degree in calcium, phosphorus and the vitamins are often discovered. From the dentist's standpoint, these substances are regarded as extremely important, and the foods containing them, notably

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milk, eggs, fresh fruits and vegetables, and meat, should never be neglected in planning the daily repast.

These foods are known as the protective foods. Scientific investigation has shown that the plentiful eating of these foods will do much toward stemming the rising tide of dental disease. Many children, in whom tooth decay is rampant, show a marked decrease in the number of cavities when their diets have been changed to include more milk, fresh fruits and vegetables, and to lessen candy and sweets. Moreover, adults generally exhibit an improved condition of mouth health when their diets have been revised and balanced.

Now this whole question of diet has been the subject of a great deal of publicity during the last ten or a dozen years. It is interesting to observe, probably as a result of this publicity, how the eating habits of the people have changed since before the war. People are becoming more conscious of the benefits to be derived from proper eating, and unquestionably much good has been done.

But publicity on dietary problems has also brought with it certain attendant evils. There has been a great tendency on the part of many well-intentioned but uninformed persons who take too literally what physicians, dentists, and dietary experts have been quoted as saying. This has led to the development of fads in eating habits, fads that have often proved to be more injurious to the body than the original faulty eating. For example, many persons, fired by a zeal to reduce weight, often when such reduction is not indicated from a health standpoint, have almost entirely eliminated carbohydrates and fats from their diets. Others have made their food intake largely vegetable with the almost complete elimination of meats in any form. Still others discuss seriously "incompatible" foods, and eat nothing but proteins for one meal, nothing but starches for the next, and so forth, on the theory that following such a regimen will reduce them or, failing to follow it, will make them ill.

(Continued on Next Page)



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Limited Facilities for Part-Pay Treatment

(Continued from Preceding Page)

All these fads have little basis of scientific fact. They often fail to accomplish the desired end, and occasionally may themselves produce even more serious conditions. Probably the most important factor in this question of diet is *balance*! To achieve that balance from day to day requires only a small amount of intelligent thought, applied to make sure that a reasonable proportion among all the different foods is maintained and that no aspect is neglected. We can afford to be more liberal in our intake of milk and this does not mean we have to drink it, for milk in cooked foods is also beneficial. We can afford to emphasize fruits for dessert rather than pastries and sweets. We can afford to use one or more green vegetables with each meal, especially if they are raw and fresh. Remember that raw cabbage in salad or other form is extremely valuable. Orange juice, eggs, toast and butter, are the fundamentals of a satisfactory breakfast.

But in following any set of directions such as these, common sense *must* be used. In the last analysis, the easiest way to solve the problem is to develop a taste for a wide variety of foods and then proceed to satisfy that taste in adequate fashion, without worrying from meal to meal as to whether enough vitamin C is contained here, or too much carbohydrate is contained there. If you are ill, if you are much overweight or underweight, get a doctor's advice on your diet. Otherwise eat pretty much what you want, within reason, and do not worry about it.—*New England Journal of Medicine*.

Protection of Workers Exposed to Chromium and Its Compounds.—In industrial work, exposure to chromium and its compounds, either through contact with the dry material, with solutions, or with dust and vapor in the air, often causes troublesome, though not serious effects of various types in workers. Because of the increasing number and diversity of uses of chromium and its compounds, efforts have recently



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been renewed toward methods of protection of exposed workers.

The Industrial Health Section of the Metropolitan Life Insurance Company has completed a study of causes, effects and preventive measures which has been published in illustrated pamphlet form under the title, "Protection of Workers Exposed to Chromium and Its Compounds." This publication is a careful scientific analysis of the problem, but is phrased in everyday language which will be understood by such nontechnical key men as plant superintendents and individual department foremen, as well as by the management of plants in which chromium processes are employed. Discussing preventive measures, the report states that "the harmful effects from chromium compounds can be wholly eliminated or reduced to a minimum, so that the risk becomes negligible. The responsibility is equally divided between the management and the worker."

Readers who wish to obtain copies of "Protection of Workers Exposed to Chromium and Its Compounds" may do so by writing The Policyholders Service Bureau, Metropolitan Life Insurance Company, 1 Madison Avenue, New York, N. Y.

Venereal Disease Control in Germany.—A reduction since the war of 30 per cent in the incidence of lues is claimed by the public health authorities of the Reich. The returned soldier was largely responsible for the material increase in the venereal diseases at the close of the war.

While no statistics are offered concerning the prevalence of gonorrhea, a marked reduction in the frequency of this infection is also claimed. Chancroid is said to have become practically extinct.

Public enlightenment, through health education, has been a big factor in securing improvement. Excellent exhibit material is available through the hygienic institute at Dresden, and is widely used for traveling exhibits.

There seems to be some confusion in the mind of the lay public regarding the meaning of the word, "Clinic," as applied to the practice of regular medicine and surgery. Recently the State of California has made it mandatory that all Clinics operate under a uniform law, irrespective of their professional status. We have decided, therefore, to eliminate the word, "Clinic," as a descriptive term for our institution, effective January 1, 1934.

**Doctors Soiland, Costolow
and Meland**

By ALBERT SOILAND, M. D.

Prophylactic treatments are available at first-aid stations of the large cities. These, however, are apparently not much used. The patients depend upon their claim upon hospital service under the federal sickness insurance law.

An effective control weapon is furnished through the provisions of the Penal Code Act, which stipulates three years in prison for knowingly transmitting a venereal infection. Since this law is enforced against men as well as women, it exercises a salutary effect in preventive control practice.

Compulsory examination of prostitutes has been re-established. These examinations are made weekly at special health department clinics; however, certificates from recognized physicians are accepted. Prostitutes found at large, who have evaded this required examination, are subject to eighteen months in the workhouse and are, of course, hospitalized if found to be infected.

While unusual consideration is shown to prostitutes who present themselves at the public clinic for weekly examination—this for the purpose of securing their coöperation for cleanliness and sanitation—the prostitute when hospitalized is kept strictly separated from other venereally infected patients who maintain themselves by work. Social service tries to rehabilitate these patients, assist them to a job and to secure better social environment.

A special bonus of thirty marks is paid to the unmarried, pregnant girl who presents herself for a Wassermann examination before the third month of pregnancy.

A proposed revision of the medical practice laws contemplates forbidding the treatment of venereal infections by any but the trained medical specialist. This would exclude the general practitioner from treating venereal disease.—George C. Ruhland, M. D., Commissioner of Health, Syracuse, New York, in *Health News* (New York State Department of Health).

Doctors Dislike Sciosophy So Do We!

"Sciosophy," according to the late Dr. David Starr Jordan, who coined the word, is the pseudo-dietetic dicta imposed by some food advertisers upon consumers. It is sad but true that by Sciosophy products of spurious value are made to seem worthy, their very existence made to seem justified.

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ROBERT A. PEERS, M. D., *Medical Director*
Colfax, California

BOOK REVIEWS

List of Books Received

BOOKS RECEIVED

Birth Control in Practice. Analysis of Ten Thousand Case Histories of the Birth Control Clinical Research Bureau. Text and tables by Marie E. Köpp, Ph. D. Prepared under the supervision of a Scientific Advisory Committee, with a Foreword by Adolf Meyer, M. D. Cloth. Pp. 290. Price, \$3.75. New York: Robert M. McBride & Company, 1933.

America Self-Contained. By Samuel Crowther. Cloth. Pp. 340. New York: Doubleday, Doran & Company, Inc., 1933.

United States Naval Medical Bulletin. Published quarterly for the information of the Medical Department of the Navy. Issued by the Bureau of Medicine and Surgery, Navy Department. Division of Publications, Commander Louis H. Roddis, Medical Corps, U. S. Navy, in charge. Compiled and published under the authority of Naval Appropriation Act for 1934, approved March 3, 1933. Paper. Pp. 131. Price, 25 cents. Washington: United States Government Printing Office, 1933.

Mental Hygiene in the Community. By Clara Bassett, Consultant in Psychiatric Social Work, Division on Community Clinics, the National Committee for Mental Hygiene, Inc. Cloth. Pp. 394. Price, \$3.50. New York: The Macmillan Company, 1934.

BOOK REVIEWS

The 1933 Year Book of Radiology. Edited by Charles A. Waters and Ira I. Kaplan. Pp. 894. Illustrated. Chicago: Year Book Publishers, Inc., 1933.

The second year book of radiology has appeared and has more than justified the expectations aroused by the first volume. Abstracts from and condensations of good
(Continued on Next Page)

NEW BOOKS for
the NEW YEAR

Joslin: Diabetic Manual (1934) . . . \$2.00
Moore: Modern Treatment of Syphilis 5.00
McIver: Acute Intestinal Obstruction 7.50
Ward: Recent Advances in Radium . 5.00
Clark: Treatment of Amentia . . . 4.25

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BOOK REVIEWS

(Continued from Preceding Page)

articles collected from numerous foreign and American journals, issued during the previous twelve months, have been translated and arranged in accessible order under the main headings of Diagnosis and Therapy. Numerous illustrations are reproduced and with surprising clarity, considering that most have been reduced in size from the original. The authors must be highly commended on increasing the number of abstracts from German periodicals, since the labor of condensing the more technical and lengthy of these must be considerable.

In the introduction to the section on Radiation Therapy, the statement is made that it is still questionable whether massive doses of radium are superior to x-ray radiation. This is hardly true, since it has been amply demonstrated that, exclusive of accessible regions like the tongue and cervix uteri, adequate radiation of tumors is much more thoroughly and readily done with properly filtered high voltage roentgen therapy. Massive doses of radium at the long skin distance required for adequate depth dosage are practically unfeasible, even were one clinic to have available all of the world's supply of radium.

The value of prolonged roentgen therapy (i. e., daily doses for thirty to sixty days) as practiced by Coutard of the Radium Institute in Paris, is properly emphasized; also the value of adequate preoperative roentgen therapy in tumors of the breast, rectum, and elsewhere is amply demonstrated.

The book should be of great value to all radiologists and of considerable interest to most other practitioners. As another reviewer has aptly written, it is to be hoped that the authors receive sufficient encouragement in their work to insure the annual reappearance of the volume.

L. H. G.

Surgery of the Stomach and Duodenum. By J. Shelton Horsley. Pp. 260. Illustrated. St. Louis: The C. V. Mosby Company, 1933. Price, \$7.50.

In this small octavo volume the author reviews the embryology, anatomy and physiology of the upper part of the digestive tract and discusses the diagnosis and treatment of various surgical diseases of the stomach and duodenum. It is a readable book, well organized and satisfactorily illustrated. The principal topics dealt with include peptic ulcer, cancer of the stomach, pyloroplasty, gastro-enterostomy and the technic of total and subtotal gastrectomy.

Tacit recognition of Rosenau's work is accorded in the suggestion that focal infection may be a factor in the etiology of peptic ulcer. With regard to the technic of intestinal surgery, the author stresses the desirability of holding the parts to be sutured by means of ligatures rather than with forceps. For instance, in doing a gastro-enterostomy he uses tension sutures which hold the stomach to a small, metal frame. To interrupt the intestinal stream he places a small ligature on either side of the proposed anastomosis. These ligatures are later removed. In the chapter on the complications of gastrectomy an open anastomosis of the transverse colon is illustrated. Since, however, many other more effective methods of practical asepsis may be resorted to in performing this operation, the reviewer questions the propriety of depicting a procedure often attended by soiling of the field. The illustration might lead the reader to suppose that such a method is a safe one.

G. D. D.

Food, Nutrition and Health. By E. V. McCollum and J. Ernestine Becker. Pp. 146. Third edition. Baltimore: E. B. McCollum and J. Ernestine Becker. Price, \$1.50.

This booklet of some 125 pages, exclusive of tables, presents most of the newer knowledge of nutrition.

The book falls naturally into two parts, namely, a purely scientific "laboratory" part and a part devoted to the clinical application of the scientific principles discussed in the earlier chapters.

Unstinted praise may be given to the scientific portion of the book. For the matter is presented concisely and yet with sufficient detail to make interesting reading. Especially is this true of the chapters devoted to the vitamins.

The mineral elements in nutrition have received more attention than has heretofore been granted them. The chapter devoted to this subject summarizes recent progress in this field and is especially instructive and interesting.

The second portion of the book invades both the field of clinical medicine and that of dentistry, in that the author endeavors to apply rather rigidly in practical medicine the deductions of the laboratory. However, when such an effort is made, it is commonly found on trial that didactic teachings fail to conform perfectly to practical conditions. The index is short but very good.

S. B.



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TWENTY-FIVE YEARS AGO

(Continued from Text Page 144)

In like manner the itch, their national disease, is stimulating and lively and has nothing of the languor and introspective misery of the American neurasthenia. . . .

From an article on "Suicide and Alcohol" by A. W. Hoisholt, M. D., Stockton.

Self-destruction is an act which was not infrequently resorted to by the ancients, some of whom looked upon it as a virtue just as the Japanese of our day consider harakiri a perfectly justifiable act under certain circumstances.

From an article on "The Early Recognition of Pulmonary Tuberculosis" by George H. Evans, M. D., San Francisco.

Were it not for the pathetic illustrations of failures to recognize tuberculosis in its curable stage that are daily brought to the attention of the phthisiotherapist, a paper with this title would scarcely be considered of practical importance beyond the confines of the undergraduate classroom. . . .

From an article on "Direct Transfusion of Blood" by Wallace I. Terry, M. D., San Francisco.

The interest in transfusion of blood has been revived within the past year or two through the improvements that have been made in the technique of vessel suture and through the production of mechanical devices for transfusion. As you know, of course, transfusion is a very old operation and was used in the Middle Ages even, but the mortality attending it was very high and became so bad it was interdicted by royal command in France at one time. Then it was revived in the eighteenth century and again in the beginning of the nineteenth century. . . .

CALIFORNIA BOARD OF MEDICAL EXAMINERS

(Continued from Text Page 144)

missed after hearing, five continued for further hearing. Ten medical licenses were restored during the year.

Ninety-four per cent of applicants for written examination passed, and five per cent failed. The two California university medical schools continued their record of 100 per cent successful examinees. Graduates of extra state schools showed the highest percentage of failures. Among the foreign medical schools represented were: graduates of Austria, two; Canada, six; Germany, one; Italy, two; Russia, two.

Two hundred and nineteen licentiates died during the year.

Six licentiates recorded a change in their name.

Sixty-three licentiates of California were endorsed to other states.

Reports relate that Abner J. Cobb, licensed chiropractor, on January 10, 1934, in the Long Beach Municipal Court, was found guilty of using the prefix "Dr." in a sign without immediately following his name with the letters "D. C." or the word "Chiropractor," and was sentenced to pay a fine of \$10 or serve five days in the city jail, sentence being suspended six months on condition that he comply with the law.

Reports relate that Frank A. Farrell, licensed chiropractor, was on or about January 11, 1934, found guilty in the Municipal Court at Long Beach of violating the Chiropractic Act by using the prefix "Dr." before his name and not following his name with the suffix "D. C." or the word "Chiropractor." He was

(Continued on Page 17)

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CALIFORNIA BOARD OF MEDICAL EXAMINERS

(Continued from Page 14)

sentenced to pay a fine of \$10 or serve five days in the city jail, sentence being suspended six months on condition that he comply with the law.

A photograph circular, just received from Burlington, Kansas, announced the escape of J. D. Conner, alias H. L. Miles, eyesight swindler, featured in the Board of Medical Examiners' pamphlet entitled "Eyesight Swindlers."

"There appears to be no merit in the appeal, and no question presented which would justify further discussion," said the Appellate Court in its decision rendered December 7, 1933, affirming the judgment by Los Angeles Superior Judge Emmett H. Wilson denying the application of Eugene Rinaldo for a peremptory writ of prohibition. (See California Appellate Decisions, December 15, 1933, Volume 75, page 850.)

Reports relate the recent arrest in Stockton of Max Pinsley assertedly for petty theft in connection with the reported sale by him of various so-called hospital association contracts, one of which was reported to be the "International Metropolitan Health and Accident Association," 988 Market Street, San Francisco. At the same time Scott Corliss, alias J. W. Ewing, E. L. Knotts, and M. J. Griffin were reported arrested in connection with the same procedure. In possession of this quartet was said to have been found what was known as a "sucker list" containing the names of various individuals with comments on their frailties, *i. e.*: "James —, carpenter, Scotch, dumb, plenty dry. Ruth, Sally and Margaret —, teacher, court reporter and librarian, Catholic, old maids; put out

lots of flattery; plenty of dough. P. G. —, grocer, Protestant, Christian Scientist, very dry; give him plenty of bolony. Paul R. —, sheriff, thinks he is pretty big, but is dumb. Mrs. Hazel R. —, husband in Denmark; lots of money; believe it or not, nuts on flowers and dogs. Mrs. Pete —, Catholic, 'and how'; lots of property and money here. Alfred —, mayor, candy merchant; dumb." There were also reported found contracts of various companies, and the District Attorney of San Joaquin County is taking an active interest in this case.

Reports relate that Frank X. Rupp, licensed chiropractor, pleaded guilty in the Justice Court at Ocean-side on or about December 14, 1933, to a charge of violation of Section 17 of the Medical Practice Act, and was sentenced to pay a fine of \$100, fine being suspended on condition that he no further violate the law.

Reports relate the recent arrest in Mississippi of Willard Thompson, alias Wilber Lester Parker, featured in the 1931 annual report of the Board of Medical Examiners as having been convicted in Berkeley of violation of the Medical Practice Act, he then claiming to be on the staff of the Mayo Clinic, Rochester, Minnesota. This individual is also featured in the 1933 annual report of the Board of Medical Examiners. The sheriff of Harrison County at Gulfport, Mississippi, reports that this impostor was in his custody twenty-one years ago, so he seems to have spent his lifetime in law violation.

"Holding that the judgment of the lower court should be upheld, the Appellate Court refused to intervene in the case of Dr. M. J. Marmillion, aged physician, convicted of performing an illegal oper-

(Continued on Next Page)



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(Continued from Preceding Page)

ation upon Margaret Scott, eighteen, last February 11, which resulted in her death. . . ." (Los Angeles *Eagle*, December 8, 1933.)

"Frederick V. Adams, chiropractor, convicted last week of violating the State Chiropractic Act by falsely advertising himself as a doctor, was fined \$100 yesterday by Municipal Judge Thomas L. Ambrose. The fine was suspended on condition that Adams place the letters 'D. C.' after his name on stationery and cards." (Los Angeles *Daily News*, December 19, 1933.)

"Dr. Margaret Whitworth, 50, chiropractor, pleaded guilty today to a charge of violating the State Chiropractic Act when she failed to place 'D. C.' or 'Doctor of Chiropractic' after her name. She entered her plea before Judge Dean Sherry, who ordered her to read the state law on chiropractic and return January 10 for sentence." (San Diego *Tribune*, December 14, 1933.)

"Dr. Anthony Del Castillo, former Colton physician, today started serving a year's sentence in the county jail for manslaughter, a charge which grew out of the death of Mrs. Mary Hernandez of Highland, 29-year-old mother of five children, after an asserted illegal operation. Superior Judge Frank A. Leonard yesterday granted the physician three years' probation on condition he spend one year in the county jail. He was also ordered not to touch liquor during the two years following his release from jail. . . ." (Colton *Courier*, December 27, 1933). Antonio Lopez del Castillo, M. D., was cited to appear at the October meet-

ing of the Board of Medical Examiners, but the hearing was continued to the February, 1934, meeting, awaiting the outcome of his trial on the charges mentioned.

"E. R. Rood, who as Tiajuana's 'astrologer of the air' was accused on two felony charges of having obtained \$400 from a San Diegan for alleged sale of fake 'Gold Tone Record Company' stock, and who in consequence is being sought by police, today was accused of having used the prefix 'Dr.' in violation of the State Medical Practice Act. Complaint, preferred by Albert Carter, state inspector, charged Rood with having posed as a doctor while selling "medicine," and fixed last October 12 as date of a specific offense." (San Diego *Tribune*, December 14, 1933.)

"Police continued without avail yesterday to hunt for Dr. Manuel M. Doria, Jr., accused of having stabbed Mrs. Nettie Rasmussen, 410 Ash Street, Tuesday night while the woman and her daughter, Olive Rasmussen, eighteen, were visitors at his office in the Watts Building. Doctor Doria, clad in dinner clothes at the time, was said to have fled from the building immediately after slashing Mrs. Rasmussen in the left breast with a three-inch bladed lance. He has not been seen since. . . . A formal complaint charging Doctor Doria with assault with a deadly weapon was issued Wednesday from the District Attorney's office. Before his attack upon Mrs. Rasmussen the doctor was at liberty on \$500 bond on a similar charge, following an alleged attack upon R. I. Rasmussen, husband of the woman stabbed, in which Doctor Doria was said to have fired a shot at the man a week ago last night in his Fourth Avenue café." (San Diego *Union*, December 29, 1933.)

(Continued on Page 21)

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Radium Therapy

Monica Donovan, M.D.

Dentistry

Thomas Morris, D.D.S.
Francis L. Meagher, D.D.S.

CALIFORNIA BOARD OF MEDICAL EXAMINERS

(Continued from Page 18)

"Six hundred pounds of relics stolen from a Chinese josshouse at Weaverville on January 9 were recovered by police, who said they were led to the cache by Dr. Thomas D. Wyatt of Redding. Doctor Wyatt was free on \$2,000 bond on a charge of robbery today after he had been named by Glenn Toutant, Inwood sawmill operator, and Philip Wyndrem, oil-truck driver of Redding. . . ." (Associated Press dispatch dated Redding, January 17, 1934, printed in the San Francisco Examiner, January 18, 1934.)

After a two-day hearing on an injunction to prohibit licensed chiropractors from using adjuncts in their practice, Superior Judge James of San Jose on January 16, 1934, rendered an opinion that licensed chiropractors cannot use electrotherapy in their practice. Undoubtedly, an appeal will be taken which will result in a higher court decision relative to the limitation of a license to practice chiropractic in the state of California. (Previous entry, August, 1933.)

Cod Liver Oil.—Professors Drummond and Hilditch have recently confirmed that for high vitamins A and D potency, Newfoundland Cod Liver Oil is markedly superior to Norwegian, Scottish and Islandic Oils.

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Federal Medical Relief.—In the October midmonthly issue of *The Survey*, the policy of the Federal Emergency Relief Administration governing expenditures by states and local communities for the care of the sick unemployed where federal relief funds are involved is interpreted by H. Jackson Davis, M. D., consultant in medical care of the administration, and epidemiologist, State Department of Health.

Clarifying as it does the objectives of the administration and the responsibility of state and local agencies in providing medical relief under the new Rules and Regulations No. 7, this statement should prove helpful to state relief administrations and to public health and welfare officials. It is quoted below in full:

"The poverty of a patient . . . should command the gratuitous services of a physician," declares the ethical code of the American Medical Association. Elsewhere that code specifies that a physician should always 'respond to any request for his assistance in an emergency or whenever temperate public opinion expects the service.' When, however, an 'emergency' involves 3,500,000 families, who now look to relief funds for the necessities of life, temperate opinion becomes aware of a too heavy drain on the unpaid work of a profession, with resultant hardship to doctors and unemployed sick.

"In many cities and some states, definite arrangements have been worked out in the past few years to pay private physicians for authorized care of patients on the community's relief rolls (see the midmonthly *Survey*, February, 1933, p. 66; April, 1933, p. 155). With the recent issuance of Rules and Regulations No. 7 of the Federal Emergency Relief Administra-

(Continued on Next Page)

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(Continued from Preceding Page)

tion, Uncle Sam has stepped into the picture with a set of principles to be worked out explicitly by states and local communities to govern their expenditures for the care of the sick unemployed where federal relief funds are involved. In some places adequate medical attention has been lacking; in others medical relief has been too expensively handled; in some, physicians have been unable to work out agreements under which they received adequate and prompt pay for authorized services. The new regulations provide the first nationwide principles for establishing official liaisons between state emergency relief administrations and the organized medical, nursing, and dental professions—state and local. The aim is 'the provision of good medical service at a low cost—to the mutual benefit of indigent patient, physician, nurse, dentist, and taxpayer.'

"Medical programs formulated under these rules shall be designed to supplement existing community medical services. As was established by earlier orders, payment of hospital bills and provision for institutional care are left as the responsibility of state or local funds. The policy for the use of federal funds is to recognize within 'legal and economic limitations the traditional family and family-physician relationship in the authorization of medical care for indigent persons in their homes; the traditional physician-nurse relationship in the authorization of bedside nursing care; the traditional dentist-patient relationship in the authorization of emergency dental care.' The phrase 'in their homes' includes visits at the physician's office for patients who can be up and about, with the understanding that such care shall not supplant existing clinic service. The physician, nurse (or nursing organization) and dentist are to agree to give, where so authorized, the same kind of care to an indigent person as to a private patient, to the minimum extent consistent with good professional judgment. Payment

(Continued on Page 24)

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(Continued from Page 22)

is to be made at agreed flat rates appreciably below the local prevailing minimum charges in due recognition of the certainty and promptness of payment for authorized services. The flat rate for authorized nursing visits must not exceed the certified costs per visit in accredited visiting nursing organizations in the community. These limitations do not preclude the payment of additional amounts from local funds. Differentiations are carefully made between regulations governing the care of acute and chronic illness, obstetrical care, special and accessory services.

"State emergency relief administrations are charged with approving policies, fee schedules and detailed procedures before they are put into effect and are urged in setting up the plans to avail themselves of the advice and help of advisory medical, nursing, and dental committees, appointed by the state and local professional organizations, to which all local programs are to be submitted for comment before final approval is given. Participation is to be open to all licensed members of the medical, nursing and dental professions who accept its provisions.

"With this order the Federal Government explicitly declares its part in the responsibility for the medical care of a substantial fraction of its citizens. The plan is built on the traditional relationship between the family and its medical attendants, which is to be preserved in so far as is possible, but the amount of the fees and extent of the services that involve federal funds are to be controlled, by agreement, in accord with general principles governing large-scale relief expenditures."—*Health News* (New York State Department of Health).

City Noise and Public Health.—The Committee on Noise of the American Public Health Association presented a progress report at the recent convention, on its study of the public health aspects and administrative control of urban noise.

Realizing that this problem is particularly complex in the large cities, the committee advocates the appointment in such places of noise abatement commissions to conduct campaigns of public education and to coordinate the activities of municipal health and police departments in enforcing noise abatement ordinances. In other communities a member of the health department staff, for example, the sanitary engineer, should assume this responsibility. The committee appreciates that routine administration of such ordinances is a function of police departments, but feels that this activity should be stimulated by health departments initiating noise abatement programs as a part of the control of environment in the interest of the public health.

Enforcement of ordinances, the violation of which constitutes a misdemeanor subject to fines of \$50 to \$500 or imprisonment of six months to one year, is difficult owing to the fact that officers are likely to overlook infringements which involve such severe penalties. For this reason the committee recommends the amendment of municipal charters to permit so-called executive fines whereby violators of such ordinances would be handed a notice, similar to a summons to a magistrate court, which the offender must take to the office of the city treasurer or collector of taxes and there pay the established fine. Failure to pay would be dealt with in the same manner as default of payment of taxes or other city obligations. Should the violator desire a judicial hearing or the officer deem such a hearing essential, a conventional summons to a magistrate court would be issued.

Recent advancements in the design and construction of vehicles indicate that, in future, traffic, now the major source of urban noise, will be a less important problem in noise abatement. Education of the public in noise prevention, and conscientious enforcement of practical ordinances are essential, however, to the satisfactory control of this phase of environment.—*Health News* (New York State Department of Health).

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Knowledge of Foods a Necessity.*—A general understanding of the composition of foods and their relative usefulness to the body is necessary for health and success in modern society. Everyone knows vaguely what foods are, but few can define with exactness what is meant by the word "food." Foods have three main functions. Food provides materials for growth and repair of the tissues of the body. Food supplies materials for burning in the body, setting free energy for muscular work and heat. More difficult to understand is that food also supplies substances in very minute amounts which regulate the many chemical reactions occurring in the body. These trace substances have the names vitamins, food hormones, and catalysts. These names will not frighten after you have become familiar with them. Keep in mind that the material supplied by foods is absorbed into the body from the stomach and intestines after the food has been more or less digested.

A few foods, such as sugar and table salt, are simple chemical substances. Most foods, however, are mixtures of from two to six types of complex chemical substances, which for convenience are called nutritive constituents. These groups of nutritive substances go by names you are already familiar with: proteins, fats, carbohydrates, mineral matter, extractives and flavoring material, vitamins and water. The diet as a whole must supply all these groups in adequate amounts. No one food, however, need furnish all the groups or the body's needs for any one group. Keep that clearly in mind. White flour or white bread is frequently condemned because it does not furnish all or much of the body's needs for these types or groups of nutrients. Such is not necessary. It is necessary, however, that the entire diet, of which white bread is one constituent, furnish all the groups of nutrients in sufficient quantity. There is no objection to white bread, or sugar,

* By Raymond Hertwig, Secretary of the Committee on Foods of the American Medical Association.

(Continued on Page 28)

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(Continued from Page 26)

or meat, if properly used. Those who cook the meals and set the tables of the nation are reminded not to omit plenty of those foods which richly supply the nutrient groups of vitamins, minerals and good proteins. Milk, vegetables, and fruits should be a prominent part of the food consumed each day.

Not all food advertising is correct or truthful. Some advertising-copy writers, who tell about foods in newspapers, magazines, booklets, and over the air seem to be little familiar with their subject-matter—foods. They should be more than specialists in advertising; they also should be specialists in foods.

The Committee on Foods of the American Medical Association is aiding the public to recognize truthful advertising by permitting manufacturers who voluntarily submit their foods and advertising and who truthfully advertise to place the seal of the committee on the package label of their foods and in the advertising. The committee seal cannot be bought; the Committee on Foods receives no remuneration for its service. The committee is a public health and welfare department of the American Medical Association. Look for the seal.—*Food Facts*.

Bad Teeth.—One of the most amazing illustrations of the brotherhood spirit is found in the welfare drives that for the past decade have been successfully staged in many of the larger communities. Present-day relief is even more emphatic of this spirit of helpfulness. However, there are those who apparently fail to realize that civic welfare begins at home.

For instance, only the other day a dental hygienist discovered inexcusable mouth neglect in three children whose parents were leaders in community betterment. The fact was that these worthy people were so busy looking after the other fellow's troubles that they did not properly appreciate their own problems.

The hygienist tactfully investigated the situation and discovered that not only had the teeth of the young-

sters been neglected, but that both parents were in immediate need of dental correction. Their excuse, which to them seemed very real, was that they had no time to bother.

Of course, this is an exceptional case. However, the fact remains that health, including mouth hygiene, is given a position way down the list in many American homes. Business, recreation, even charitable pursuits, fine as they may be, frequently take precedence over health considerations. Most decidedly this is putting the cart before the horse.

Denying the body the natural and basic requirements of proper living and preventive and corrective treatment frequently results in serious illness and untimely death. And the man or woman who habitually indulges in such practices is far from being a civic asset, no matter what form his objective charity may assume.

More and more it is being realized that the semi-annual visit to the dentist's office and an immediate call for his services in the event of a noticeable condition arising in the meantime, is the finest kind of health and life insurance possible to obtain.

Add to this the annual physical examination and reasonable living habits, and one possesses a splendid bulwark against many of the afflictions that today are taking such a premature toll among those of middle age, and older.

Therefore, by all means be charitably disposed. There never was a time in the country's history when there was more reason to be so. But do not forget that charity begins at home. Proper attention to mouth hygiene is an excellent form of this latter type of charity.—*Food Facts*.

The Rockefeller Foundation.—During 1932 The Rockefeller Foundation appropriated \$11,577,064 for projects in the fields of the medical, social, and natural sciences, the humanities, and public health. A printed report on these activities has just been issued.

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For public health work the Foundation expended during the year the sum of \$2,539,057.15. It supported laboratories for yellow fever research in Lagos, Nigeria, Bahia, Brazil, and New York City; assisted the government of Brazil in an extensive program for the control of yellow fever; aided four states in the United States and the health administrations of seventeen foreign governments in antimalaria work; conducted malaria studies in various parts of the world; assisted ten foreign governments in antihookworm work, comprising laboratory and field programs; continued support for studies of tuberculosis, the common cold, undulant fever, yaws, schistosomiasis, and typhoid fever; contributed toward the development of the central or local health services of forty-three foreign governments; gave assistance to the central health administrations of eleven states and to the local health work of 164 counties in twenty-two states in the United States; and, finally, provided funds for the support of 225 international fellowships in public health.

The aim of the public health program is not merely to gain new knowledge of a limited number of diseases and public health problems, but by concrete demonstrations in the control of these maladies to fix attention upon problems of public health, to educate governments, and to induce them to give increased attention to the fundamental health needs of mankind.

In recent years increased emphasis has been placed on careful correlation of studies of a disease in its environment with investigations in the laboratory. Through this procedure it becomes possible to make headway in the search for more effective and less expensive methods of disease control. Research is always conducted in coöperation with government health departments. When such research is successful the Foundation aims to assist governments in preparing and trying out plans for the prevention of disease through application of the knowledge gained by research. More than one hundred papers were published

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in the scientific press during 1932 and the early part of 1933 describing research work in public health problems carried out by members of the Foundation staff or under Foundation auspices.

Highlights of the year in yellow fever work were the continued success of vaccination against yellow fever; the verification in the state of Espirito Santo, Brazil, of a mild epidemic of yellow fever occurring in the absence of *Aedes aegypti*, the usual mosquito carrier; and the clearing up of various moot points connected with the behavior of the virus in the mosquito and the usefulness of certain yellow fever laboratory tests.

In the field of the medical sciences, after ten years of concentration on capital aid for buildings and on the endowment of certain medical schools, Foundation emphasis during recent years has shifted to the support of specific research programs. In 1932 special attention was given to the field of psychiatry. The total amount appropriated for the medical sciences was \$3,090,973.

The largest appropriation of the year in the medical sciences, \$1,282,652, was made to McGill University, Montreal, Canada, for the establishment of a neurological institute. These funds provided for laboratory quarters and endowment for the departments of clinical neurology, neurosurgery, neurophysiology, and neuropathology. In addition, many small appropriations were made in support of research projects in the field of neurology, elsewhere. Included among these were grants to the Kaiser Wilhelm Institute for Brain Research, at Berlin-Buch, Germany, and to the Institute for Psychiatric Research at Munich, for investigations of infections of the central nervous system; to the Institute of Physiology of the University of Bern, Switzerland, for research on the excitation processes in nerves; and to the London Hospital for training in neurosurgery.

(Continued on Next Page)

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(Continued from Preceding Page)

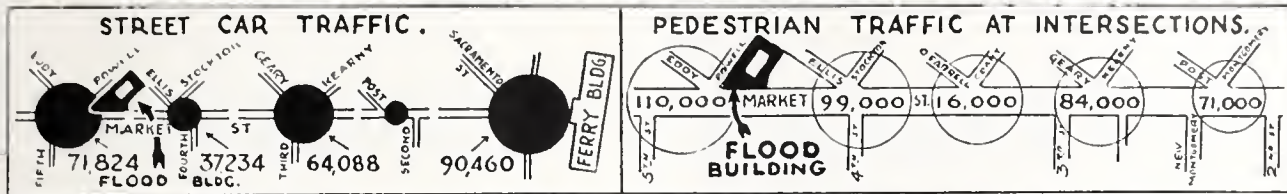
Among other research projects in the medical sciences receiving support were studies of the physiology of the acoustic nerve at the Johns Hopkins University School of Medicine; studies of whooping-cough at the Western Reserve Medical School; studies of virus diseases, especially of the nervous system, at Columbia University and at Washington University, St. Louis; biological research at the Radium Institute of the University of Paris; and investigations of the National Research Council Committee for Research in Problems of Sex. Funds were provided during 1932 for the support of 383 fellowships for the training of research workers in the medical sciences.

The main features of The Rockefeller Foundation's program in the natural sciences during 1932 were aid to specific research projects and support of a system of fellowships and travel grants. The work for which assistance was given during the year falls within the

fields of paleontology, meteorology, astronomy, physics, chemistry, and biology.

A grant was made to the International Commission for the Polar Year 1932-1933 for the purchase of special equipment in connection with world-wide meteorological studies conducted by this Commission. Aid was given to the California Institute of Technology for specific research projects in physics and chemistry. An appropriation was made to Harvard University for the furthering of chemical research in connection with the heat of organic reactions.

Aid was continued for studies which have been going on for some time at Chou K'ou Tien, near Peiping, China, where the remains of the prehistoric human being, *Sinanthropus pekinensis*, have been discovered. "Black earth" found in the cave from which these remains were taken has been identified as charcoal. This carries with it inferences as to the use of fire by *Sinanthropus pekinensis*. A considerable number



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of quartz artefacts have been recovered. There can be no doubt that *Sinanthropus* was of truly human status. This maker of crude stone artefacts must have had hands differing in no essential respect from our own.

Among other institutions receiving aid were the Long Island Biological Association, the Zoological Station of Naples, the Perkins Observatory at Ohio Wesleyan University, the Institute of Inorganic Chemistry of the University of Göttingen, the Massachusetts Institute of Technology, the Palmer Physical Laboratory of Princeton University, and Yen-ching University and Fukien Christian University in China.

Funds were provided for the support of 291 fellowships in the natural sciences.

The principal objective of The Rockefeller Foundation's program in the social sciences is the more effective analysis and better understanding of pressing social problems with a view to the improvement of the prevailing conditions of human life. The description of the year's work falls into two parts: a general program designed to promote certain interests in the social sciences as a whole, and a program of specific concentration in fields of special interest.

The general program includes four types of activity: the development of institutional (largely university) centers of advanced training and research; support of inclusive advisory and planning bodies, chief among

which has been the Social Science Research Council in New York City; the provision of training and research fellowships, by which, in 1932, opportunity for advanced study was given through fifty-six fellowships administered by the Social Science Research Council and 167 fellowships under direct Rockefeller Foundation supervision; the maintenance of grants in aid and small projects, as well as certain larger undertakings of general interest such as the *Encyclopaedia of the Social Sciences* and *Social Science Abstracts*. All these types of activity were carried on abroad as well as in the United States.

The development of institutional centers of advanced training and research is regarded as the essential basis of the entire program. Nineteen institutions thus aided are listed in the annual report of the Foundation. The research now recognized by university administrators as essential to progress in the social sciences is costly in terms of both time and money and has been greatly retarded by the economic depression. During 1932 new appropriations to centers of research included those given to the Universities of North Carolina and Texas, as well as to Stanford University and Harvard University.

In addition to the general program the Foundation has supported social science research in three specific

(Continued on Page 35)

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ACCREDITED REPRESENTATIVE OF THE CALIFORNIA AND NEVADA MEDICAL ASSOCIATIONS

VOL. XL

FEBRUARY, 1934

No. 2

CARCINOMA OF THE CERVIX—ITS ADEQUATE TREATMENT*

By LYELL C. KINNEY, M. D.
San Diego

DISCUSSION by A. R. Kilgore, M. D., San Francisco;
Frank W. Lynch, M. D., San Francisco; William E.
Costolow, Los Angeles; Lyle G. McNeile, M. D., Los
Angeles.

THE treatment of carcinoma of the cervix in this country has swung almost entirely to radiation. There has been ample reason for this. Radiation treatment has little morbidity and almost no mortality, and in the hands of expert radiologists, has given as high a percentage of five-year cures as has expert surgery. Inadequate radiation, although not producing cures, has brought about relief of symptoms and gratifying temporary palliation. Surgery of carcinoma of the cervix presents unusual difficulties. Except in the uncommon early case, simple hysterectomy is useless and involves the penalty of cutting through active carcinoma. Radical surgery comparable to radical breast surgery claims an unjustifiable mortality in the average hospital, and failure to recognize the limitation of surgery with attack on inoperable cases has had a discouraging morbidity as well as a high operative death rate.

INADEQUATE RADIATION

In spite of the recognition of radiation and the large percentage of cures from radiation, the difficulty in attaining adequate radiation of carcinoma of the cervix is as great as is adequate surgery. Inadequate radiation is more futile than simple hysterectomy, while over-radiation or errors in judgment and technique result in extensive ulceration and necrosis, with intense suffering. A careful evaluation of the final results of radiation in general practice is not as encouraging as the results of expert surgery in this condition.

Recent reports of a few outstanding surgeons such as Bonney,¹ Adler² and Lynch,³ show a percentage of five-year cures equal to that of the large clinics using radiation alone. Their results in the very early operable cases, especially where surgery has been combined with pre- or postoperative radiation, are unique. Increasing experience with

adequate surgery will probably result in a return swing of the pendulum and a wider use of surgery in the treatment of carcinoma of the cervix. It is therefore timely to question what are the indications for surgery or for radiation, and what constitutes adequate surgery and adequate radiation?

EARLY RECOGNITION IMPORTANT

Carcinoma of the cervix is rarely discovered early. Cases in group 1 under the Schnitz classification, where the growth is limited to the canal or covering less than one centimeter of the face of the cervix, are symptomless and usually discovered accidentally. Beyond these rare early cases we are dealing with a problem similar to that of carcinoma of the breast. Extension to the broad ligaments and metastasis of the lymph glands must be expected in every case. Martzloff⁴ found microscopic carcinoma in the parametrium in 30 per cent of his operative cases, and Leveuf⁵ found metastases to the lymph glands on the pelvic wall in 47 per cent of his operable group. Thus any attack upon carcinoma of the cervix must include the adnexae and glands on the wall of the pelvis, and must be no less radical than corresponding therapy in carcinoma of the breast. Treatment that is directed solely to the cure of the local lesion of the cervix is no more adequate than the excision of a lump in the breast without the removal of the lymphatics in pectorals and axilla. Adequate treatment requires the removal or destruction of possible carcinoma as far out as the wall of the pelvis and the bifurcation of iliac vessels. Whether attempted by surgery or radiation, the indications are the same.

OPERABLE AND INOPERABLE CLASSIFICATIONS

The division of cases into operable or inoperable or the grouping of them under any classification depends largely upon the personal equation of the operator. Hence the comparison of statistics regarding the treatment of any one stage in carcinoma is difficult. There is, however, remarkable agreement between the results of all the large clinics as to the total salvage of patients (Table 1). Whether radiation is used exclusively or where surgery is extensively used, the percentage of five-year cures from all sources is very close—approximately 23 per cent. The exception is Adler² of Vienna, who claims 32 per cent of five-

* Read before the Radiology Section of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

TABLE 1.—Five-Year Cures (All Cases)

Radiation		Radical Surgery	
Heyman	23.3	Schauta	22.5
Bowing	23.0	Bonney	25.0
Ward	24.8	Wertheim	20.0
Healy	22.5	Lynch	20.3

Note.—Total salvage with adequate treatment is the same whether treatment is by radiation, radical surgery or a combination of the two.

year cures with the radical Schauta hysterectomy followed by postoperative radium and repeated deep x-ray therapy.

In stages 1 and 2 of carcinoma limited to the cervix, the five-year cures from surgery or radiation are practically identical, averaging about 50 per cent, but these results are obtained only by radical surgery or where the radiation is adequate (Table 2). The choice of the method depends largely upon the ability and experience of the surgeon, and the question of operative mortality.

What, then, is adequate surgery? Simple pan-hysterectomy has no place in the treatment of carcinoma of the cervix, except in the accidental extremely early case. Lynch⁶ reports twenty-six cases treated through hysterectomy by competent surgeons without a single five-year cure. Acceptable results come only from the few expert pelvic surgeons who are able to do a complete radical dissection of the pelvic lymphatics and keep their operative mortality low. Nothing short of a radical removal of the parametrium and the adjacent lymph glands, as is exemplified by the Wertheim or Schauta operations, can be considered adequate surgery. Furthermore it must be remembered that surgery is distinctly limited by the extent and microscopic classification of the growth. Only those cases of stages 1 and 2, where the growth is limited to the cervix without clinical evidence of extension, are operable. Also those cases of undifferentiated rapidly growing carcinoma of Broder's type 4 must be eliminated.

INDICATIONS FOR SURGICAL INTERVENTION

There are, however, definite indications for surgery in the hands of expert and experienced operators. Lynch's report³ of 89.5 per cent of five-year cures in stage 1 carcinoma is evidence of the value of radical surgery in selected cases when combined with preoperative radiation. Two indications for surgery are important.

1. About 20 per cent of carcinomas of the cervix are not radiosensitive as is shown from three different angles. It is Healy's⁷ experience that 20 per cent are not altered by preliminary x-ray therapy. In Healy and Cutler's⁸ survey of the cases

TABLE 2.—Five-Year Cures (Operable Cases)

Radiation		Radical Surgery	
Ward	53.1	Lynch	58.8
Regaud	42.0	Schauta	42.0
Heyman	44.4	Bonney	39.6
Burnham	55.0	Auer	56.0
Phillips	52.0	Phillips	56.0
Healy	55.0	Adler	58.0

Note.—Results of adequate radiation alone or of radical surgery in the operable group are very similar. Radiation avoids the usually high surgical mortality.

at the Memorial Hospital, 20 per cent of carcinomas of the cervix are microscopically of the adult fully differentiated type. Mayer⁹ found viable carcinoma in 20 per cent of the cases operated three months after radiation, using the Stockholm technique. Thus early carcinoma limited to the cervix that is clinically non-radiosensitive, or that shows adult type of cell structure, is an indication for surgical removal.

2. The occasional carcinoma with evidence of pelvic inflammation or salpingitis must be considered surgical, as vigorous radiation threatens a dangerous peritonitis in these cases.

WHAT IS ADEQUATE RADIATION?

What is adequate radiation in the treatment of carcinoma of the cervix? The radiation must destroy carcinoma cells over a wider area than does removal by panhysterectomy. It must be as far reaching and sterilize the lymphatics as effectively as does the removal by the Wertheim dissection. To be adequate, lethal radiation must be given throughout the true pelvis. Expressed in terms of the amount of radiation required to produce a skin erythema, at least from 400 to 500 per cent of this dosage is necessary to destroy carcinoma

TABLE 3.—Adequate Radiation (Five-Year Cures)

	Early	Intermediate	Advanced
Howard Taylor	75%	41%	8%
Mayo Clinic	75%	63%	21%
Regaud	73%	38%	27%

Note.—With widely differing technique the results of adequate radiation are very close.

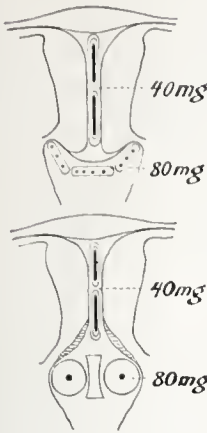
cells in the majority of cases, and this amount of radiation must be evenly distributed throughout the true pelvis (Schmitz¹⁰).

VARIATIONS IN RADIATION TECHNIQUE

There is a confusing variation in the technique used effectively in different clinics, but the results of experienced radiologists are strikingly similar irrespective of technique (Table 3). Whatever the method of application, the essential factor in any efficient treatment is to deliver lethal radiation to the parametrium and adjacent pelvic glands. This involves cross-firing these structures from several directions to the limit of normal tissue tolerance. It is not possible to project adequate radiation from the uterine canal alone, nor can it be given by external radiation alone. All variations in technique are based on the principle of cross-firing the entire pelvis with heavily filtered radiation to attain an even distribution of safe lethal doses (Table 4).

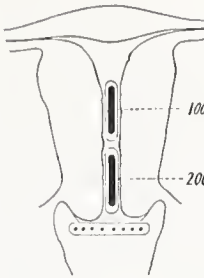
The fact of wide variation in technique, each with treatment extending over two to four weeks' time, is ample evidence that adequate radiation does not consist merely in inserting a capsule of radium into the cervical canal for a given number of hours. Any standard technique involves many important factors that must be accurately followed to give the intended radiation safely and distribute it efficiently. For example, the Stockholm technique¹¹ is not merely three applications of 2,200

Heyman , Stockholm



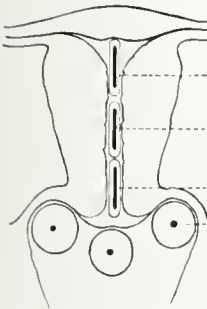
Radium—3 mm lead filter
Uterine applicator fills canal
Vaginal applicators shaped to
fit growth or crater and
distend fornices.
3 treatments 20 hours each
Interval one and three weeks
Dosage - Uterine 2380 mgh
Vaginal 4500 mgh
Total 6880 mgh
X-ray after completion
of radium

Healy, Memorial.



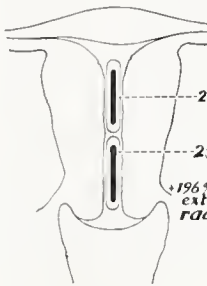
X-ray 4 ports 700-800r within 10 days
Radium. 2 applications, one against
& one in cervix.
Filter. Cervix 0.5mm Pt or Au
Vagina 2mm. Br.
Dosage. Cervix 3000 mghrs.
Vagina shaped applicators
1000-2000 hrs. Total 5000
Gold seeds 4-6 weeks for residue

Kaplan, Bellevue



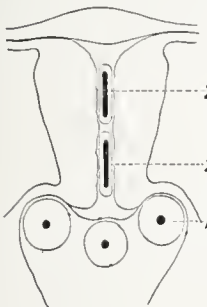
X ray 100% to 4 areas, 25% to
two areas daily
Radium continuous 65mg. 4 to 5 days
Filter. Uterus 1mm. pt.
Vagina 2mm pt. + 3mm rubber
Dosage. Uterus 2000 mghr.
Vagina 4500.
100 hrs. (i.e. 76 to 124).
Total 6500 mghrs.

Schmitz, Loyola



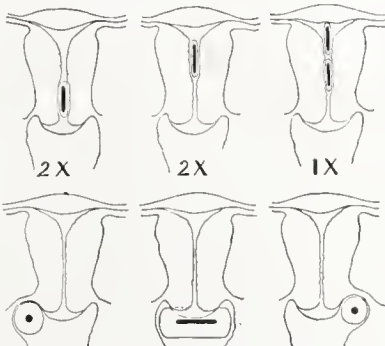
X-ray and Radium Bomb, each, 10 doses
daily except Sun. to Tues.
X-ray 20% each dose. x 5 to 900r
Radium, 3 Mondays 32 hrs. each.
Filter, Ag. 0.5, Br 1.5,
Rubber 2.5 mm.
Dosage, 1600 mghrs x 3, Total 4800
None in vagina.

Cutter, Michael Reese.

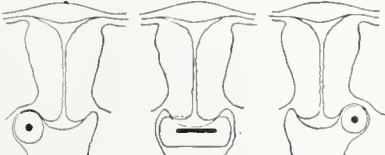


X-ray 4 areas 150r x 4 = 600r to
each area in 3 wks.
Radium, continuous 80mg 80-120 hrs.
Filter, Uterus 1mm. Pt.
Vagina 1.5mm Pt + 3mm rubber
Dosage. Both 3000 to 3750 mghrs.
Total 6000-7500

Bowing (Mayo Clinic)



Dosage
Cervical 2400hrs.
Uterine 1200hrs.
Vaginal 1800hrs
Total 5400mgh



Xray 200kv 4 ports
during 4th wk.

Each capsule 50mg. filter = 0.5 pt.
Vaginal adds to 1 1/2 pt + 1 cm. rubber
All doses 12 hrs. each in three weeks time

Table 4.—The six different methods illustrate the average technique used in giving adequate radiation. All are based on the principle of cross-firing the true pelvis to the limit of safe tissue tolerance; all are varied in the individual case to suit the extent and character of the growth. In all the radiation from each source is carefully balanced to give a safe and efficient total depth dosage.

milligram hours of radium with a one and three weeks' interval: it involves filtration with 3.0 millimeters of lead and equivalent secondary filter. The cervical applicator must fit and fill the entire length of the canal of the uterus. The vaginal radium must be applied in containers sufficiently numerous and flexible to distribute the radium accurately and evenly over the entire cervical growth, and at the same time to reach as far as possible out into the parametrium by distending the lateral fornices. This technique also involves deep x-ray therapy with very heavy (Thoraeus) filter. All of these factors are varied with the condition of the patient, the size of the vagina and the extent of the growth, and are based upon an enormous experience in both surgery and radiation. While only 120 milligrams of radium are used in any one case, a large amount of radium in many

sized applicators is required to follow this technique with any degree of accuracy.

LIMITATIONS IN CERVIX RADIATION

The radiation of the pelvis for carcinoma of the cervix presents very narrow limitations. Sufficient radiation must be given to destroy carcinoma cells throughout the lymph drainage area on the one hand, and the radiation must not destroy normal tissues on the other. Outside of these narrow limits too little radiation will not cure, and too much will cause intractable necrosis. To attain this optimum of radiation the amount given from each source, external, vaginal and uterine, must be determined and integrated in each case so that the total may be adequate. Furthermore, the safe lethal dose must be judged by the extent and cell character of the tumor.

For the average clinic with small amounts of radium (200 milligrams as directed by the American College of Surgeons¹² and ordinary deep therapy x-ray equipment), the essentials of all the standard techniques may be expressed as follows:

1. *A Careful Study and Preparation of the Patient.*—In addition to a complete physical and laboratory survey, the extent of the growth is determined and checked by cystoscopic or proctoscopic examination if indicated. The complete radiation program is laid out, balancing the dosage of radium indicated against the measured amount of x-ray required to give uniform effective distribution. If local infection is present it is controlled before the radium is applied. Biopsy at or before the first radium application determines the cell structure and grading.

2. *Radium in the Cervical and Uterine Canal.* The radium applicators in tandem extend from the external os well above the internal os, preferably to the fundus. Proper filtration requires that the radium be inclosed in capsules of 1.0 millimeter of platinum, or its equivalent, plus aluminum or rubber. The dosage varies from 2,500 to 4,000 milligram hours, depending upon the amount of radiation given in the fornices and the time elements of prolonged application or intervals between fractional doses.

3. *Radium in the Vagina.*—Heavier filtration and greater distance are used to protect the thinner and more radiosensitive vaginal wall, and to compensate for the absence of the thick uterine muscle which serves both as filter and distance in the cervical and uterine applicators. The filter is increased to 1.5 millimeters of platinum and the distance to 7.0 millimeters. This permits the use of the vaginal radium for distant cross-fire of the adnexae without causing necrosis of the vaginal wall. The applicators distend the fornices as far out as possible to project a maximum of radiation into the base of the broad ligaments and the adjacent lymphatics. Aside from the applicators in the lateral fornices, one or more applicators are placed against the surface of the growth. The dosage in the vagina is reciprocal with that used in the cervix and also varies with the size of the vagina, the extent and character of the growth and the time elements mentioned above. From 2,000 to 4,000 milligram hours are the usual limits.

Exceptions to the use of vaginal applicators are found in the techniques of Schmitz, Ward and Curtis. Schmitz¹⁰ makes up for the vaginal source of radiation by increasing his uterine dosage to 4,800 milligram hours and doubling his external radiation, using the 4.0 gram radium cannon plus deep x-ray therapy to deliver approximately two erythema doses in addition to the uterine radium. Ward¹³ and Curtis¹⁴ attain the necessary cross-fire by inserting radium needles through the vaginal wall, but this enters an unnecessary risk without increasing the amount of radiation.

4. *External Radiation by High Voltage X-Ray.* The addition of external radiation is indicated in all but the very early cases. Considering that 30 per cent to 47 per cent of operable cases have metastases in the parametrium and pelvic glands,

and that the lethal dose of radium is limited to 3.0 centimeters from the uterine and vaginal applicators, it is necessary to supplement the radium with x-ray if the outer zone of the pelvis is to be effectively treated. The amount of radiation and the number and size of the fields used depend upon the measurements of the patient and the amount of the radium given. The summation of the radiation from the radium sources plus the depth dose of x-ray must reach, but not exceed, the required lethal dose throughout the pelvis.

In all but the early cases x-ray treatment preferably precedes the radium. This reduces the size of the growth and the distortion of the cervical canal, and also diminishes the vaginal infection. The radium applications are then made with greater ease and accuracy and less trauma.

5. *Continued Supervision and Subsequent Radiation.*—The highest rate of cure is attained in clinics with the most complete follow-up system. Nodules that have not disappeared in six to eight weeks are implanted with seeds in gold or platinum, or with small platinum needles restricting the dose to 120 milligram hours per centimeter. Following this the monthly or bi-monthly examination detects early recurrences that can be promptly treated by interstitial radiation or by small doses of heavily filtered radium in contact. Usually from 700 to 1,200 milligram hours of contact radium are the maximum. Complete adequate radiation cannot be repeated without serious danger, but the discovery and local treatment of early recurrences add about 13 per cent to the number of five-year cures.

COMMENT

These five factors are essential to every adequate technique. The selection of a standard technique by the radiologist will depend upon his experience and the amount and distribution of the radium available. But the selection of a standard routine should be definitely made, and all the details carefully estimated, to ascertain that the radiation is safely and efficiently distributed. Any successful technique presupposes thorough training in both gynecology and radiation. Whether the technique is that of continuous radiation, frequent broken doses, or weekly intervals is immaterial so long as a definite, carefully measured program is adopted and followed with accuracy and precision.

What are the indications for radiation in carcinoma of the cervix? All cases not strictly localized to the cervix should be treated by x-ray and radium. Early localized cases of undifferentiated cell structure are best treated by radiation. Where experienced radical pelvic surgery is not available, all early cases should be treated by radiation alone. Healy and Cutler⁸ report 50 per cent of five-year cures even with adult type of cell structure in early cases.

The outstanding results of Lynch³ and Adler² are based on a combination of radiation and radical surgery in operable cases. It is, however, futile to attempt to use radiation to supplement incomplete surgery. There is no indication for radiation to aid the result of a simple panhysterectomy.

The surgeon who does a hysterectomy and then sends the patient to the radiologist for "a little x-ray, or "a little radium," is only trying to justify his surgical interference and has no conception of the place of radiation in adequate treatment.

SUMMARY

Adequate treatment of carcinoma of the cervix requires as complete and radical measures as does carcinoma of the breast. The parametrium and pelvic lymphatics are involved in from 30 to 47 per cent of all operable cases, and metastases should be considered present in every case. Adequate surgery can be no less radical than the Wertheim or Schauta operation, and such surgery is indicated only in early limited carcinoma of differentiated cell structure, and then only in the hands of a few exceptionally experienced operators. Simple panhysterectomy is not adequate surgery, and postoperative radiation does not make it adequate.

Adequate radiation depends on cross-firing the parametrium and pelvic glands with heavily filtered x-ray and radium, with doses equivalent to radical surgery. The radiation from these sources must deliver a total of from four to five skin erythema doses evenly distributed throughout the true pelvis. The zone of adequate radiation lying between incomplete treatment on the one hand and distressing over-radiation on the other is very narrow. The attainment of adequate radiation presupposes mature surgical judgment, training and experience in therapeutic radiology and accurate technique.

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DISCUSSION

A. R. KILGORE, M. D. (490 Post Street, San Francisco).—By a clear analysis of the principles of radiation therapy for carcinoma of the cervix, Doctor Kinney has drawn a picture of adequate radiation clear enough to be comprehended by any physician, and equally clear is the conclusion that radiation therapy cannot be expected to cure cancer of the cervix in the hands of any but specially trained and experienced radiologists. A little radium in the hands of a casual user is an extremely dangerous engine. It is time for

us to realize that the removal or the treatment of the visible or palpable primary growth is not the treatment of cancer, and that cures can only be expected following well established, carefully followed surgical or radiation procedures aimed at the whole disease as we know it from pathological study.



FRANK W. LYNCH, M. D. (University of California Medical School, San Francisco).—Doctor Kinney's conclusions, as given in his paper, are logical and sane. There can be no doubt but that surgery has a very limited field in the treatment of cancers of the uterine cervix. At least nine-tenths of them are inoperable when first seen by the physician. The word "inoperable" is good English: it means in this connection that even the most radical surgery will fail to cure. On the other hand, radium and high voltage deep roentgen ray, properly applied, can cure from 8 to 15 per cent of these otherwise hopeless cases. So we clearly see that the surgeon who operates upon a patient with an inoperable cancer to give her the proverbial "one chance in a thousand" not only does her no good, but actually deprives her of the very considerable chance of life that she could have had from radium had surgery not been used. The patient gains nothing from radium treatment after the cancer tissue has been incised by nonradical surgery.

There would be no field for surgery, even in the treatment of the operable or early cervical cancers if 20 per cent or more did not contain cancer cells in which radium does not kill the so-called radium-resistant cells. True, there are very few truly operable cases in any large series, yet they are the only ones which we should confidently expect to cure. To lose even one in ten of them should reflect upon our therapy. Yet radium in this group has never cured 80 per cent of them, nor has equaled the results obtained by radical surgery alone.

If we could recognize before treatment the cancers that are radium-resistant, the proper treatment would be simple indeed: we would radiate the radium-sensitive cancers, and remove surgically the others in event the patient was a good surgical risk. Yet we cannot so recognize them. The histologic classifications of Broders, Martzloff, and others, which have proved helpful when dealing with cancers of the lip and breast, have proved useless for me in my study of 450 cervical cancers, and to Ward in his series in the Woman's Hospital of New York. Nor can even the most expert tell by gross inspection whether there are live cancer cells in the deeper levels of a cervix that externally appears smooth and as if the radium had cured. Morton, in my clinic, studied twenty-six uteri removed after preoperative radiation, in none of which could be seen gross indications of cancer. Yet there were only eleven in which cancer cells could not be found. Until radiologic methods are developed which will kill the cancer cells ray-resistant by present methods, surgery must retain some place in proper carcinoma therapeutics, provided it can be accomplished with little operative mortality and has been preceded by radium and the deep roentgen ray. This opinion, long since developed in my clinic, has received much support by others during the past few years.

Some years ago I compared the survival cures of two equal size groups of early and borderline cases—(a) those treated only by radium, and (b) those operated radically after preoperative radiation—and found a three-year cure equal in both groups (74 per cent), but a five-year cure in Group A of only 38.4 per cent, while in Group B it was 72.4 per cent. The percentage of cure in Group A seems small, yet is practically equal to that of other radium clinics at the time of the review. The uteri from Group B were available for study. The two groups were composed of practically identical cases, all grouped by me; the radium dosage in Group A was even larger than that given in Group B; all patients in both groups had been carefully followed and studied continuously not only for the five-year period, but as long after as they continued to survive. Some patients are still on follow-up fifteen years after treatment.

Morton has studied for me twenty-nine specimens in nearly all of which I had removed the uterus, tubes, ovaries, parametria and upper vagina by bloc dissection in one piece; all had had radiation from two weeks to five months before operation. The microscopic findings in some of these have been presented in a preliminary report by him. No microscopic evidence of cancer was found in only eleven of these twenty-nine cases, live cancer cells were found in eleven, and cancer cells interpreted as dead or dying were found in seven.

Observations similar to these have been recorded by others. Thus, Monod in 1927 found cancer cells in the cervix of uteri removed five to six weeks after radiation by Regaud's method in fifteen of seventy-four cases; and Mayer, in 1930, in sixty of seventy-two cases six weeks after less radium dosage (only 1200 milligrams). Lahm, however, in 1928 and 1930 reported twenty-four distinctly operable and early borderline cases in which only six specimens were free from cancer three months after radiation; live cancer cells were found in seven, and dead or dying cancer cells in eleven. The radium dosage in Lahm's series ranged from 3600 to 4100 milligrams, Stockholm technique; deep roentgen-ray therapy also had been given to nearly all. These reports more than outweigh the negative evidence of others in older literature—the three cases of Ward, two of Ewing, the eight of Schauta, etc., all of whom failed to find cancer cells in uteri removed after radiation of smaller dosage than that given by Lahm, Monod, and myself. These observations seem to force the conclusion that until radiologic methods are developed which will kill the cancer cells radium-resistant to present methods, proper radical surgery has a place in the treatment of Stage 1 good surgical risk patients whose cancer has been previously rayed.

The trouble with evaluating cancer therapy is the long period of observation that must elapse before the results of treatment can be known. Any change in the technique of the method requires another five years to determine whether the so-called improvement was actually real. My clinic is attempting to shortcut this long period of waiting by studying the microscopic findings in uteri removed five or six months after roentgen ray and radium treatments, Memorial technique. When we no longer find cancer cells in such specimens we will give up our radical surgery. During the past eighteen months, we have had seven cases, a number inadequate for any conclusions. Unless other clinics join in such study, it will be years before this vital question is truly solved.

While I feel certain that surgery has a place in proper cancer therapy of the present, I am certain that it should not be undertaken by the general man, or by anyone not trained to do it, and make the operative specimens a subject for cancer research. To urge surgery as a routine treatment of even early cases would be a great mistake at the present time. Few men will undertake the truly radical operation and carry out all of the essentials so necessary for cure. The profession as a whole will kill far more patients by radical surgery than it possibly can cure; any other surgery than the truly radical operation can only be condemned. Our profession as a whole is now radium-minded and should remain so until the question is absolutely solved. At the same time, we should remember that radium is capable of as much harm as good and by no means is a safe agent to put in untrained hands.

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WILLIAM E. COSTLOW, M.D. (Soiland Clinic, Los Angeles).—The author has given an excellent survey of the present-day status of the treatment of carcinoma of the cervix. About all that can be done in the way of discussion is to emphasize some of the points he has brought out. Radium has been found to be adequate to destroy carcinoma in practically all cases when it is confined to the cervix and adjacent vaginal vault. In 80 to 90 per cent of the cases met with routinely in practice, however, the growth has extended beyond the cervix and involved the pelvic

glands. Experience has shown that surgical removal of these glands yields very few absolute cures. Radiation has given promise of accomplishing more in these cases, and especially in the rapidly growing, highly malignant, radiosensitive growths. As the large majority of cervical growths are highly malignant and consequently radiosensitive, the hope is further augmented that, by increasing the radiation dosage to the disease in the pelvic glands, a larger number of cases may be rendered free from disease. The action of radium alone is not sufficient to secure this dosage out into the pelvic gland areas, and consequently we must rely on the addition of penetrating high voltage x-ray for this aid. It has been shown here by Doctor Kinney that, by divided dose applications of deep x-ray therapy, at least five surface doses may be applied to the pelvic gland areas. This may even be increased in the future by the use of higher x-ray voltages. The full value of the possibilities of radiation therapy in carcinoma of the cervix has not yet been reached. Radiation treatment of this condition not only requires gynecological judgment and adequate equipment of radium and x-ray apparatus, but, above all, necessitates a comprehensive knowledge of the physical action of these agents and an appreciation of their effects, if the most favorable results are to be secured.

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LYLE G. McNEILE, M.D. (523 West Sixth Street, Los Angeles).—The importance of cancer education, as applied to the laity, has been emphasized by practically every organization devoted to the study of malignancy during the past five years, but unfortunately, it is true that a large proportion of those members of the medical profession who are in general practice, and who have the best opportunity of discovering carcinoma in its early stages and outlining its adequate treatment, are wholly unfamiliar with present trends. Doctor Kinney has presented viewpoints with which I am in hearty accord. He presents very clearly the limitations of surgical treatment, and treatment by radiation, and clearly explains the meaning of the term "adequate radiation." Carcinoma of the cervix has occupied a very large position in surgery. In every case the decision as to the type of treatment is a serious matter, for it may mean the difference between life and death for that patient.

THE REFLEX NERVE CONTROL OF THE CORONARY BLOOD FLOW*

By CHARLES W. GREENE, Ph.D.
Columbia, Missouri

DISCUSSION by Joseph O. Hinsey, Ph.D., Palo Alto; J. M. Olmsted, Ph.D., Berkeley; Chauncey D. Leake, Ph.D., San Francisco.

THE immediate output of energy by the heart is self-limited by the amount of oxygen available from the blood flowing through the coronary arteries. When there is an increase in the work of the heart, the amount of oxygen it will consume is essentially in direct proportion. Determination of the rate of oxygen consumption of the body to the work of the heart is due to Lindhard. During a normal heart rate of 68, discharging 4.9 liters of blood per minute, the body consumes 330 cubic centimeters of oxygen. When the rate is doubled to 130 beats per minute, and the output is 18.5 liters, there is an enormous increase of oxygen used by the body. In Lindhard's table the oxygen consumed is increased six-fold. This is made possible only by corresponding general increase in the volume of blood flow.

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The flow of blood through the coronary vessels is controlled by two factors. The first factor is a direct but passive mechanical stretching in response to changes in blood pressure. The second factor in control is the active physiological coronary vasoconstriction and vasodilatation. It is to this last that we contribute by experimental data.

NOTES FROM THE LITERATURE

It has been known since the days of Newell Martin that the coronary flow varies directly with changes in blood pressure. The rise or fall of general blood pressure in itself passively increases or decreases the coronary flow, although the amount is far from adequate to account for Lindhard's figures.

It was W. T. Porter of Harvard University who in 1896 discovered that the coronary blood flow decreases on stimulating the cervical vagus trunk. This was the first experimental evidence of efferent vasonerves to the coronary blood vessels, *i. e.*, vasoconstrictors. In 1899 Maas, in Langendorf's laboratory, confirmed Porter's findings and made the further discovery that coronary dilators are distributed to the blood vessels of the heart chiefly by way of the first thoracic ganglion.

The literature, aside from my own work, contains only one reference to reflex control of the coronary blood flow: von Anrep and Stegall secured reflex coronary dilatation on stimulating the central end of the divided vagus trunk.

OBJECT OF THE PRESENT STUDY

For several years now we have carried on investigations in the physiological laboratories of the University of Missouri to confirm and extend the physiological knowledge of the mechanisms involved in the control of the coronary circulation. We have made tests on dogs, sheep, and monkeys. More than seventy-five animals have been used in these researches with a total of 2,600 individual physiological tests. We have repeated and extended the work of Porter, Maas, Morowitz, and a number of more recent authors, relying on the method of Morowitz and Zahn, which permits the computation of the rate of the coronary flow at every moment.

Our chief effort has been to demonstrate the presence of, the type, and the pathways of all nerve reactions of reflex nature involved in the coordination of the coronary blood flow with events in other parts of the body. The major group results are given chiefly by the slides which follow.

FINDINGS

In the main, we confirm Porter, Maas, and later authors in outlining the pathway and type of efferent coronary vasoconstrictor and vasodilator reactions. We have no slide showing an actual experiment on the vagus, but the computations of data clearly prove that the cervical vagosympathetic trunk contains both coronary vasoconstrictors and vasodilators. Milder stimulations often produce dilatations, strong stimulations produce constrictions, or dilatation followed by constriction. In fact, both types of coronary nerves are

present in the cervical vagosympathetics. Maas observed this fact, indicating that vasodilators were not always present, and that the constrictors produce the usual vascular change. We would say, because vasoconstrictors are in greater volume. Porter and Maas both classified the fibers as true vagal, a classification not previously questioned. But we have concluded that they may be at least in large part of the usual thoracic origin of vasomotor nerves.

We find that the coronary vasodilator nerves are present in rich supply in the stellate ganglion and its cardiac branches. Dilatation is usually profound and easy to obtain. This is the chief vasodilator pathway. But some coronary vasodilators run toward the head and even make the loop of the superior cervical ganglion. This type was extreme in three of our dogs. However, here, too, the stellate tests occasionally induced coronary constriction and not dilatation. The explanation is simple, namely, that the coronary vasoconstrictor fibers reach the heart chiefly by way of the superior cervical loop and the vagosympathetic pathway, but that in certain animals a considerable outflow of coronary vasoconstrictor fibers passes more directly from the stellate to the cardiac plexus. The two sets of antagonistic fibers have a common origin in the thoracic cord, but the constrictors run a somewhat higher course to their distribution. Crucial proof is yet to be applied before the old concept of vagus origin of coronary constrictors can be wholly discarded.

I have emphasized the detail of pathway of both classes of efferent nerves to the coronary vessels since this mechanism is involved in the accepted surgical methods for treating angina pectoris, and the similar vascular disturbances in Renaud's disease.

THE REFLEX PATHWAYS

The evidence for reflex pathways must be summarized as briefly as possible. I shall mention four regions as typical for the whole body.

1. *The Cardiac Chest Area.*—Stimulation of the entire cervical vagus or of its central end produces reflex coronary dilatation. This we have repeatedly shown and, of course, in confirmation of von Anrep's single reflex demonstration.

2. *Afferent Paths from the Appendages, Sciatic Paths.*—Stimulation of the central end of the sciatic produces pronounced reflex coronary reaction. Mild stimulation induces coronary dilatation, very strong stimulation produces an initial dilatation followed by pronounced coronary constriction. Intermediate strengths result in reflex coronary changes, primarily dilator, but often diphasic, *i. e.*, dilatation followed by constriction. These responses demonstrate the presence of both dilator and constrictor reflexes, via the common sciatic trunk. The coronary effect depends on the algebraic sum of their stimulation.

3. *Abdominal or Visceral Paths.*—The stimulation of the celiac ganglion, or the central end of its branches, produces also a profound coronary reflex. This, like the sciatic reflex, is primarily dilatation, but it may be dilatation followed by

constriction, indicating the presence of both types of reflexes.

4. *The Phrenics—Reflexes from Afferent Phrenic Neurons.*—Most physiologists and physicians are unaware of the richness of afferent nerve supply present in the phrenic trunks. While our results are very inconstant, we have secured profound reflex coronary dilatation on stimulating the central end of either phrenic. The slide shows very pronounced coronary dilatation in several tests. There are also extreme respiratory reflexes in response to central phrenic stimulation.

COMMENT

The coronary reactions from these four regions—the limbs, lower trunk, the chest, and the cervical—have been used as types to justify the conclusion that the body, as a whole, is well supplied with reflex pathways to the coronary blood vessels. These pathways are similar to and closely associated with the reflexes that influence the heart rate and its volume.

I wish that time permitted a detailed discussion of the significance and bearing on clinical and surgical medicine of the physiological results just presented. Obviously the control of the normal coronary circulation is interfered with by every pathological condition directly affecting the walls of the coronary vessels of the heart, or affecting the nervous mechanism controlling the coronary vessels. Also, it is obvious that the greatest importance must be given to the coronary dilator reactions. It is these reactions that actually adapt the volume of blood flow to the changing heart work. If there are pathological coronary lesions which make normal dilatation impossible, cardiac acceleration may still occur; but reflex coronary dilatation is hindered, the heart cannot receive the necessary increase in the volume of blood, and partial or severe acute asphyxiation takes place. This, we believe, is the physiological basis of the great majority of attacks of angina pectoris. The picture is *asphyxiation from failure of coronary dilatation*. It is exactly the opposite mechanism assumed in the theory of constrictor spasm usually given, although the end-result is the same, namely, cardiac asphyxial spasm. Clinical progress must always rest on the support of rational physiology. The present demonstrations promise hope of greater success from increasing cardiac oxygenation by the reflex control of the coronary circulation. This theory of failure of pathological dilatation was first announced in a paper before the Missouri State Medical Society in 1931 (*Journal of the Missouri State Medical Society*, page 466, 1931).

In conclusion, I may state that experimental animals present the greatest quantitative variability in reactions of the coronary vessels. This, too, must be of great clinical importance if similar variability can be assumed for the human animal.

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DISCUSSION

JOSEPH C. HINSEY, PH.D. (Stanford University, Palo Alto).—This work of Doctor Greene supports, in the main, previous work on the physiology of coronary circulation. In addition, it gives us some very

interesting new observations. It indicates that the thoracolumbar sympathetic outflow contains both vasoconstrictor and vasodilator pathways to the cardiac vessels. He does not believe that the vagus proper carries vasoconstrictor impulses to the heart, as was indicated by the work of Anrep and Segall (1926) and Danielopolu, Marcon and Proca (1931). However, his observations fall into line with those of Burn (1932), who demonstrated both vasodilator and vasoconstrictor responses in the hind limb, following stimulation of the abdominal sympathetic trunk. Burn recognized the possibility that, stimulating the same nerve fiber, might produce either vasodilatation or vasoconstriction, according to the physiological conditions at the time of stimulation. Some of Burn's results can be explained only on the assumption that there are two sets of fibers, one for vasoconstriction and one for vasodilatation. It is surprising that Doctor Greene does not describe any efferent vagal pathways to the coronary vessels. Woollard's observations (1926) show that there are efferent vagal fibers to the coronary vessels, for he could trace axones from the postganglionic parasympathetic neurones in the wall of the heart to the adventitia of the coronary vessels.

The observations on the reflex pathways are exceedingly interesting. In showing a coronary dilatation with weak stimulation of the central end of the cut sciatic, and an initial dilatation followed by a pronounced vasoconstriction with very strong stimulation, he has demonstrated the reversal which has been known for some time in other phases of vascular physiology. In the coronary vessels, as in the vessels of the extremities, the reflex vascular response depends upon what functional components of the sensory nerve are activated on stimulation, and probably upon how frequently they are activated. In stressing the significance of the afferent supply in the phrenic, Doctor Greene has brought out a very important point. Capps and Coleman (1932) have emphasized the significance of the afferent content of the phrenic in the interpretation of the reference of pain from the diaphragmatic pleura and peritoneum. However, to be sure that the afferent limb of the reflexes, which Greene obtained from stimulation of the phrenic, passes through the dorsal roots of the cervical segments supplying the phrenic, it would be necessary to rule out any communications to the phrenic from other sources, that is, afferent fibers passing in the thoracolumbar sympathetic outflow.

If the efferent outflow to the coronary vessels is in man as Greene has described for the experimental animal, one might explain some of the success with operative procedures for angina pectoris. He states that the antagonistic fibers have a common origin in the thoracic cord, but the vasoconstrictors run a somewhat higher course to their distribution. If there is a dissociation of vasoconstrictor and vasodilator pathways in the thoracolumbar sympathetic outflow, the removal of the left superior cervical sympathetic ganglion might break the efferent pathway for vasoconstriction and thus prevent ischemia of the cardiac muscle. Furthermore, the variability in the course of the two pathways might explain varying clinical results with the different operations which have been used. However, Greene's discussion of the interference with vasodilator reflexes due to pathology in the walls of the coronary vessels seems very reasonable. It appears that the most reliable approach to the relief of pain from the heart is not the efferent innervation, but rather the afferent, as has been suggested again recently (1933) by White, Garrey, and Atkins.

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J. M. D. OLMSTED, PH. D. (University of California Medical School, Berkeley).—The textbook statement in regard to control of blood flow in the coronary arteries is, briefly, as Doctor Greene states: vagal fibers are constrictors, sympathetic fibers are dilators; the former exert a tonic action, so that when their influence is removed, for example, by cutting the vagus, dilatation of the coronary arteries results; the sympathetic nerves, on the contrary, are supposed to have

a direct action on the musculature of the coronary arterioles.

The most interesting point in Doctor Greene's paper from the standpoint of the physiologist is his conclusion that the vasoconstrictors are not of true vagal origin.

We shall look forward to seeing a fuller account than was possible in his present paper, of the experiments on which he bases his conclusions.



CHAUNCEY D. LEAKE, Ph. D. (University of California Medical School, San Francisco).—It is sincerely to be hoped that the California Medical Association may be able frequently to have presented before it such sound physiologic work of practical significance as that reported by Doctor Greene. Doctor Greene's procedure is in the tradition of Claude Bernard, and furnishes an excellent example of what Bernard meant by "experimental medicine."

The theory that the clinical condition known as angina pectoris results from cardiac asphyxiation due to failure of coronary dilatation, in the face of an increased rate of cardiac contraction, should assist materially in the clinical prophylaxis of this condition, which is after all the best therapy. It is well established physiologically that the oxygen consumption of the heart is directly proportional to the rate of contraction. Not only may work cause this, but even strong emotional states such as anger, excitement, or fear. The outpouring of adrenin from the adrenals in emotional disturbance not only accelerates the heart, but also has a vasoconstricting effect. This may have been the mechanism of the classical angina picture recognized by John Hunter in his own case. Doctor Greene points out four important nervous reflex pathways which may be concerned in regulating the caliber of the coronary vessels. As Doctor Greene emphasizes, cardiac acceleration may occur in the face of pathologic conditions, making normal dilatation impossible. In such acceleration more oxygen is needed, and if the coronary vessels cannot dilate to furnish more blood cardiac asphyxiation occurs. The obvious method of preventing anginal attacks under this theory is to do everything possible to avoid cardiac acceleration. This may be done by avoiding emotional disturbance, work, or the use of certain drugs.

It may be that many of the same factors in modern life which predispose toward "nervous breakdowns" also tend to cause the anginal syndrome. Weir Mitchell's "rest cure" and other efforts to induce people in middle age or later to lead more quiet lives may thus find application in other medical fields than those pertaining to the central nervous system.

PRE-GANGRENOUS ARTERIOSCLEROTIC AND THROMBOANGIITIC ISCHEMIA—CONTROL OF PAIN THEREIN*

By FREDERICK LEET REICHERT, M. D.
San Francisco

DISCUSSION by Steele F. Stewart, M. D., Los Angeles; Carl W. Rand, M. D., Los Angeles; Howard W. Fleming, M. D., San Francisco.

THE outstanding symptom that occurs when the circulation to an extremity is impaired is pain, irrespective of whether the circulatory disturbance is due to varicose veins, to ligation of the main arterial trunk following trauma, to the alternating ischemia and congestion seen in Raynaud's disease, to the distressing, aching pain during rest as well as movement in thromboangiitis or

Buerger's disease, or to the cramp-like pains of arteriosclerotic claudication. Coolness and color changes in the skin of such extremities, as well as the degree of arterial pulsation aid in the diagnosis, but the patient seeks the help of the physician because of a gradually developing pain which in time becomes incapacitating.

The two common conditions in which severe pain in the extremities is encountered are thromboangiitis obliterans and arteriosclerosis. In both of these conditions the pain in the extremities is a local manifestation of a generalized pathological process, which in Buerger's disease produces thromboses in both the arteries and veins, associated with a certain degree of perivascular inflammation. An important characteristic of Buerger's disease is the development of a collateral circulation, which is temporarily at least more or less adequate for the nutrition of the limb. Arteriosclerosis produces a generalized or scattered obliterative process limited to the arterial tree.

PURPOSE OF TREATMENT

In treating these patients, efforts are made, first, to prevent the progress of this pathologic process and, secondly, to secure relief from the local manifestations in the extremities. Such treatment aims at protection at all times from cold and trauma, and improvement in the circulation of the limb, and amelioration of pain by the interruption of the sympathetic impulses to and from the extremity.^{1, 2, 3}

RELATION OF THE SYMPATHETIC NERVES

Recent knowledge^{4, 5, 6} indicates that the sympathetic nerves to an extremity accompany the peripheral nerves and form a part of their trunks. Some are efferent and emerge from the nerve trunks at intervals to innervate segmentally the walls of the arteries and veins, sweat glands, and hair follicles; others are afferent, and convey pain and other sensations to the brain. Ablation of the sympathetic ganglia and chain in the upper thoracic region for the upper extremities, and the upper lumbar chain for the lower extremities, interrupts these sympathetic pain impulses as well as the vasoconstrictor fibers. The limb becomes warm and dry, the superficial veins remain dilated, vessels are no longer painful when traumatized, and in the course of several weeks the terminal portions of the arterial tree, particularly the arterioles, enlarge so that an increased circulation in the extremity results.^{7, 8} (Fig. 1).

There is then a definite rationale for sympathetic interruption to the thrombo-angiitic and arteriosclerotic extremities manifesting pain and impaired circulation.

DIAGNOSTIC TEST FOR NATURE OF THE PAIN

Since it is of pain that patients with these conditions complain, the only satisfactory diagnostic test that we have at present to determine whether sympathetic ablation will help (and a test which will in a large measure permit the patient to be

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Fig. 1.—Absence of normal arterial tree in an arteriosclerotic leg, showing the sparsity of vessels (left). Sympathetic block before amputation caused the terminal arterial vessels to increase in number and size (right).

the judge) is the paravertebral injection of the sympathetic chain and ganglion by novocain as advocated by White.⁹ This injection does not interfere with any activity of the patient, and when applied while the patient has pain or when the pain can be induced by walking serves in most instances as a fair criterion of the relief that can be secured either by operative removal or alcoholic injection of that portion of the sympathetic nervous system.

As this diagnostic novocain test lasts only about an hour, the latent effects of a permanent sympathetic block are not obtained, such as continued increase and dilation of the vascular bed, which leads to an increase of skin temperature; so that in a few instances where the test has been applied while the thrombotic process is dominant, only slight improvement in the thermal response of the skin and in the ability to walk is found. If such patients are given a permanent sympathetic interruption, definite and continued improvement is noted after the second or third week when collateral circulation has become more adequate. Experience with patients of this type has led us recently to feel that sympathetic ablation is indicated in all cases of thromboangiitis and arteriosclerosis with pain even if their symptoms and signs show very little change during the diagnostic novocain block.

OPERATIVE PROCEDURES

The operative procedure for removal of the sympathetics to the upper and lower extremities has been developed by Adson and is well illustrated in the papers of Adson¹⁰ and White et al.¹¹

In the arteriosclerotic and, because of recent economic depression, in the thromboangiitic, we have resorted to alcoholic injection of the sympathetics. Theoretically, if the ganglia are destroyed by alcohol the result should be as permanent as operative removal. Some of our patients have been relieved for a period of nearly two years after one injection. Others have been reinjected one or more times before the block has become effectual.

This injection is performed in the same manner as for the diagnostic novocain block, and is done in the ambulatory patient without any general anesthesia. Using the method of Labat or the more recent modification of Lundy described by Flothow,¹² we have endeavored to place the ends of the needle close to the sympathetic chain, so that when a few drops of 95 per cent alcohol are injected the patient will complain of transient epigastric or abdominal pain. Failure to secure this pain immediately indicates that the needle points are not near the sympathetics, and that they must be shifted to a more accurate position. When the transient referred pain is once secured, between two and three cubic centimeters of alcohol are slowly injected.¹³ The pain is severe for several minutes because the sympathetics are irritated, causing sweating and coldness in the extremity; but when this pain has ceased the limb becomes dry and the superficial veins prominent, indicating that a sympathetic block has been secured. The needles are placed opposite the spinous processes of T₁, T₂, and T₃ for the upper extremity, and opposite the interspaces of L₁, L₂, and L₃ for the lower extremity. Since there are anatomical vari-

ations as to the position of the sympathetic chain lateral or anterolateral to the vertebral bodies, as well as marked variations in the thickness of the psoas muscles, a hard and fast rule of measurement for placing the needle points has been found most unsatisfactory. Usually on the left side the lumbar sympathetic chain courses more anteriorly on the vertebral bodies, and Labat's angle for introducing the needles gives better results. If with a few drops of alcohol superficial pain along the peripheral nerves of the lower abdomen, groin and thigh is obtained, the needles must be introduced one to two centimeters deeper to pass through the psoas muscle, continually touching against the vertebral bodies, until the epigastric pain is secured.

COMPLICATIONS OF INJECTION PROCEDURES

All patients injected have had some degree of alcoholic neuralgia and myositis, varying from a mild lumbago, which did not interfere with work or sleep, to an annoying sharp or dull neuralgic pain with hyperesthesia in back and groin, lasting in some instances from one to four weeks. Two patients had localized friction rub for several days after upper thoracic block. One arteriosclerotic patient had an exploratory laparotomy about four weeks after bilateral lumbar sympathetic block for severe abdominal pain and tense abdominal muscles. Nothing abnormal was found, and the retroperitoneal tissues in the region of injection felt normal. A severe bilateral peripheral neuralgia would have given the same symptoms. Another young thromboangiitic patient in whom, after a month, the effect of an alcoholic block had worn off, had the sympathetic chain removed by operation two months after injection. A considerable amount of slightly yellowish fluid was found in the abdomen. Since he had no abdominal symptoms, and as his pathologic process had produced a number of thrombosed veins, the explanation of the abdominal fluid could be attributed to his disease rather than to a late development from the alcoholic injection.

The lung, pleura, intercostal veins, probably the vena cava, and even arteries have been entered with the needles. Aspiration, always done before the injection of either novocain or alcohol, has given warning of the abnormal position of the needle. In four instances small amounts of novocain, and in another case less than a centimeter of alcohol, was injected into the lung without any untoward effect, except that the patient tasted the substance injected and had a spasm of coughing.

An old man had an acute cardiac dilatation from walking too far after relief from his claudication.

Two very nervous patients had periods of generalized sweating, except in the regions controlled by the sympathetic block.

Two arteriosclerotic patients were temporarily impotent, attributed to alcoholic block of the genitocrural and ilio-inguinal nerves.

THERAPEUTIC RESULTS

Twenty-nine patients in the arteriosclerotic group, with ages varying from forty-nine to

eighty-five, had one or both lumbar sympathetic chains injected with alcohol. Five of these patients were women. It was necessary to reinject with alcohol five of these persons, and in two of them two reinjections were necessary before the sympathetic block persisted. In one Japanese man, a permanent block was not obtained, in spite of two injections. He was a wrestler, with thick psoas muscles. Four leg amputations were required because of ascending inflammation and gangrene of the foot appearing two weeks, three weeks, three months, and nine months after the alcoholic injection. In two patients amputation of gangrenous toes, after the sympathetic block, was sufficient. There was an increase in the ability to walk from double the former distance up to fifteen blocks or two miles. Considering relief from pain and increase of walking distance, twenty-four of these patients were improved, some markedly. Four underwent amputations, and one secured no relief because a sympathetic block could not be achieved.

The range of age in seventeen thromboangiitic patients who were injected was from twenty-three to sixty-two years. All were men, and in two of the group a unilateral and a bilateral thoracic block was done for involvement of the upper extremities, resulting in relief from pain and circulatory improvement for three weeks (patient left town and inquiring letters were returned) and for seventeen months.

Of the fifteen patients with the thromboangiitic process evident in the lower extremities, seven were given a bilateral lumbar sympathetic block with alcohol. Three were reinjected, and two of these had two reinjections. The duration of the block ranged from a recent case of two months to seventeen months. After reinjection all except two could walk farther, and all except two had an immediate rise in skin temperature. Six patients had ulcers on their toes at the time of injection: in two the ulcers healed, one had the toe amputated, and three had the leg amputated ten days to eight months after the sympathetic block. Two patients were subsequently operated on for surgical removal of the sympathetics when the alcohol block had disappeared. One patient died suddenly of coronary occlusion the day after the injection. Another patient died nine months after injection, due to pulmonary emboli from an infected foot. Three patients could not be traced one, three, and four months after injection. Nine were relieved markedly of their symptoms and considered improved; two had subsequent operative removal of the sympathetics; three died of their disease, and three had amputations of their legs.

CONCLUSION

Relief from pain or its marked improvement has been secured by interruption of the sympathetic pathways to and from the extremities of arteriosclerotic and thromboangiitic individuals.

Greater relief has been secured by this procedure than by any other form of treatment tried in previous years.

The pathologic process in both arteriosclerosis and Buerger's disease is generalized. Efforts are made to limit its extent, and even after the sympathetic block of the extremities care in protecting the limb with impaired circulation from cold and trauma is emphasized.

Preliminary paravertebral novocain block of the sympathetic chain is the most satisfactory test, because it allows the patient to be ambulatory and to aid the physician in judging whether permanent interruption will be beneficial.

Alcoholic block of the sympathetics rather than operation is less severe in the old arteriosclerotic, and because of economic reasons is satisfactory for the thromboangiitic patient.

In twenty-nine arteriosclerotic patients there was one failure in securing a sympathetic block. In five, reinjections were necessary. Four amputations of the leg were performed for ascending inflammation and gangrene subsequent to the block. Twenty-four patients had complete relief or marked relief from pain both at night and during walking.

Alcoholic injections for involvement of the upper extremities were made in two of the seventeen cases of Buerger's disease, with improvement lasting three weeks and seventeen months. Three patients were reinjected. Of the six patients with ulcers on their toes, in two the ulcer healed, one had the toe removed, and in three amputation of the leg was not averted. Three could only be followed one, three, and four months after injection. Nine were relieved markedly of their symptoms; two had subsequent operative removal of the sympathetic chain, and three died of their disease.

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DISCUSSION

STEELE F. STEWART, M. D. (3780 Wilshire Boulevard, Los Angeles).—Doctor Reichert has given us a luculent clinical picture, and has presented a new attack on the diseases which are rooted or branch in increased sympathetic activity.

I am glad that both he and Doctor Adson have forsaken the rather medieval method of selecting operative patients by applying tests of uncertain value to conditions of unknown physiology, and have taken the view of "try and see," letting determinative laws arise from experience. I cannot claim entire innocence in these matters, for by x-rays I have excluded the arteriosclerotic, whose "pipe stems" Doctor Reichert has shown have a living physiology.

In my eight years of experience with sympathectomies in vascular effects, each of the thirty-five patients operated upon has shown benefit in warmed, painless extremities that have been restored to more normal activity. Amputations have been reduced in number and magnitude. Only one patient has had a reamputation, but gangrenous tissue has not been revived. Amputations of all the legs, save two, have been below the knee, and only parts of fingers have been lost.

I must admit that the alcoholic injections leave me cold: the technique is inexact even in the hands of an expert, as Doctor Reichert admits, and I would not care to have my vena cava even gently pricked. I am not unmindful of the alcoholic transverse myelitis that has occurred following attempted injection of nerves close to the spine. Economically, I can see no excuse for the injection method when, by using the technique of Royle, a patient having a dorsocervical trunkectomy could leave the hospital in twenty-four hours, and could be moved home after a lumbar sympathectomy in four or five days. From the standpoint of mortality, I can see no ground for abandoning the decisiveness of surgery for the incertitude of alcohol, as I have had no surgical deaths in three hundred sympathectomies for various conditions.

Finally, I cannot too strongly urge early recognition and immediate surgery as the best preservative of life and limb, and the chief bulwark against economic loss, disquietude and loss of spiritual peace.

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CARL W. RAND, M. D. (1023 Pacific Mutual Building, Los Angeles).—Doctor Reichert's paper calls attention to the surgical features relating to the sympathetic nervous system. That there is a definite field for sympathetic nerve surgery, is undoubted. As he has indicated, the scope of this field is practically limited to various forms of vascular lesions, especially those forms associated with ischemia. Much enthusiasm was displayed when alcohol injection of the various branches of the trigeminal nerve was first introduced. Those who have had experience in injecting tic douloureux patients with alcohol come, in time, to dread the second, or third, or fourth efforts. As a rule only in the very aged is continued alcohol injection advised in place of surgery. A similar analogy may exist regarding the sympathetic nervous system. That alcoholic injections may be the method of choice, especially in the old and feeble, seems evident. The effect of the alcohol apparently is not as lasting as one might wish.

If the sympathetic ganglia are destroyed by the alcohol, the benefit should be permanent. Apparently this rarely occurs.

Doctor Reichert mentions certain accidents which must be guarded against. The writer well recalls a patient seen some years ago upon whom an alcohol injection of an intercostal nerve was attempted for intercostal neuralgia. By some hook or crook, alcohol got into the spinal canal with a resultant paraplegia. After a number of months of anxious waiting, the patient's condition improved to the point where she again was ambulatory. Such accidents should not happen, but there is always danger when injecting large quantities of alcohol in the neighborhood of the spinal foramina. After all, one wonders if it is not better judgment, when possible, to remove the ganglia under the eye by surgery, rather than to more or less blindly attempt their injection with alcohol?

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HOWARD W. FLEMING, M.D. (384 Post Street, San Francisco).—The sympathetic nervous system has always been a most tempting field for surgical exploration. Its ramifications form a network of intercommunication between all the important systems of the body. The possibility of altering and improving the function of glands of internal secretion—the circulatory, the respiratory, and nervous systems—by interrupting the sympathetic control, is most intriguing.

Most neurosurgeons have been disappointed with the results obtained by ramisection in cases of spastic palsies. However, the experiences with these cases has led to more encouraging results in certain types of circulatory disease, arthritis, and trophic disorders. Those pioneering in the field have attempted to be most conservative and identify well recognized syndromes and cases in which one might reasonably expect a worth while improvement as result of operation.

Cases of dysfunction resulting from impaired blood supply have been divided into two classes. Surgery of the sympathetic system does not improve the circulation of an extremity in a patient whose vessels are occluded by thrombi, or whose thickened walls are spastic. However, if the arterial walls are still sufficiently elastic to dilate when the vasoconstricting influences are interrupted, one can anticipate improved circulation and marked relief from all symptoms, including pain.

Many surgeons feel the necessity of attempting to visualize the condition of the vessels by the use of intravenous vaccines, spinal or local anesthesia, and an estimation of the thermal changes before recommending therapy. If pain can be relieved by operation or alcohol injections in all cases of vascular disease, as suggested by Doctor Reichert's paper, the field of therapeutic endeavor is greatly enlarged.

Anyone who has exposed the cervicothoracic or lumbar ganglia will appreciate the difficulty and danger of injecting them with alcohol. Many serious complications have been reported, and the procedure is not without considerable risk. Certainly the uninitiated should not attempt it.

I feel that in patients where the diagnostic tests suggest a vasomotor element as the chief cause of the circulatory disturbances, operation is to be preferred. It is safer in regard to complications, more certain in the results, and more permanent.

Alcohol injection can be reserved for patients with impending danger of amputation, those exhibiting definite contraindications for operation, and those in whom operation is precluded by economic circumstances.

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DOCTOR REICHERT (Closing).—I appreciate the discussion of this subject, and wish, in closing, to emphasize the fact that practically all of the injections were made in clinic patients, many without any funds at all, so that I was forced to utilize the method of alcoholic injection, although personally I would have much preferred the operative method.

RECTAL DISEASES—THEIR INJECTION TREATMENT*

AN ECONOMIC PROBLEM

By WILLIAM H. DANIEL, M. D.
Los Angeles

DISCUSSION by Norman J. Kilbourne, M.D., *Los Angeles*; M. S. Woolf, M.D., *San Francisco*; Dudley Smith, M.D., *San Francisco*.

DURING this economic stress it has become necessary that illness be relieved with the minimum cost and loss of time. The cost of medical care has been a favorite topic of the lay writer and has become a vital problem of medical organizations. Any method of treatment which tends to minimize discomfort, expense, and to conserve earning power, naturally is the one chosen by the patient, and should be the one advised by the physician when the results of this method equal or approximate those obtained by other forms of treatment.

TREND OF RECTAL TREATMENT

In the past, rectal diseases have received less attention from the profession at large than have those of other parts of the body. Frequently, useless medication was prescribed or unnecessary hospitalization and surgery done. At the present time the nonoperative or injection treatment of internal hemorrhoids has replaced, to a great extent, the surgical procedures. This method has been practiced by regular ethical proctologists for many years, although it has not been proclaimed by them as a cure-all, nor has undue publicity been given it. The pseudo-ethical practitioner and the advertising proctologist have capitalized the good qualities of this method, and have informed the public by means of publicity in the newspapers, over the air, and by booklets, case reports and postcards, that a cure without pain, loss of time, or hospital expense is guaranteed. Since a cash payment is usual, the revenue diverted from the regular physician is considerable.

INDICATIONS FOR INJECTION THERAPY

It is not the purpose of this paper to discuss in detail the technique of the injection method, but to point out some of the indications and some of the untoward results as they apply to the welfare of the patient. This method should be used whenever a satisfactory result might reasonably be expected, including the effect obtained, both locally and upon other parts of the body which are so often affected by rectal disorders, especially the gastro-intestinal tract. Internal hemorrhoids of the simple bleeding or prolapsing type respond most readily. This class constitutes probably less than 40 per cent of rectal conditions. It must be remembered that all individuals do not respond alike. This treatment has a very important place in that group of patients with constitutional disease, and in the aged, for whom any type of surgery is dangerous; and also in that large class of persons who absolutely refuse any kind of oper-

* Read before the Southern California Medical Society meeting at Riverside, October 28, 1932.

ation because they have been impressed with the idea that surgery is unnecessary. Each individual should be made definitely to understand the merits of limitations as applied to his particular abnormality.

Internal hemorrhoids, complicated by anal fissure, small fistulae, papillitis, cryptitis, papillomata, or polypi, may be treated successfully, and the offending pathology removed either beforehand or subsequently with local anesthesia in the office. In not too severe cases the patient should not lose more than one or two days from business. Simple fissures may be cured by the injection treatment. Hemorrhoids of long standing, especially those with a hyperplasia of the mucosa, those complicated by the more severe types of pathology mentioned above, and those accompanied by a derangement of the anatomical relationship between the anus and rectum, should be treated surgically in the hospital under the type of anesthesia indicated for each individual case.

Ordinarily, the hospital stay is from three to five days, and the loss of time from business about one week. For the patient earning \$100 per month, the cost, including all hospital charges, plus the loss of one week's revenue, but not including the surgeon's fee, approximates one month's salary. The patient is grateful if he is saved that expense, and, to him, at the moment, a greater or less difference in the final result is secondary. The better result, following the single operation, is obtained by thorough drainage of a chronically infected rectum with a restoration of the parts to a more normal condition by the removal of redundant and scar tissue. Recurrence following proper surgery is uncommon.

INJECTION TECHNIQUE

The injection treatment of internal hemorrhoids consists in depositing some sclerosing drug, *e. g.*, phenol, quinin and urea hydrochlorid, cresol, or salicylic acid, or combinations, into the hemorrhoidal mass for the purpose of collapsing the blood vessels and shrinking the redundant mucosa. If properly done, there is no pain, or at the most, only a slight aching which lasts but a short time. There is some dispute as to the best site for the injection, and the choice of drug depends upon the physician. Equally good and bad results have been obtained from all of them. Perhaps it is the amount of the drug used, and perhaps it is the site of injection which leads to complications such as frequently occur. When the technique has been faulty, there is an ischemia of the parts, followed by necrosis, sloughing, hemorrhage, or infection.

UNSATISFACTORY RESULTS

Unsatisfactory results of the injection method follow incorrect diagnosis and faulty technique. Proper training in examination and diagnosis has not, until recently, been given in the medical schools and hospitals. The number of articles in the medical journals describing this method is increasing, and it seems that the authors either have had no poor results or have forgotten to mention them. The simplicity of the technique and mone-

tary advantages have also been stressed by the itinerant proctologist, who promises to turn out full-fledged specialists in from a few days to two weeks, for a fee ranging from \$10 upward. The drug and instrument houses, through detail men and advertisements, offer free instruction in the simple art of curing hemorrhoids with their special specula, needles, or solutions.

The common conditions misdiagnosed and mistreated as internal hemorrhoids are: (1) Anal fissure or ulcer. (2) External thrombotic hemorrhoids and skin tags. (3) Abscesses. (4) Chronic ulcerative proctitis and colitis. (5) Amebic proctitis. (6) Cryptitis and papillitis. (7) Pruritus. (8) Benign tumors. (9) Carcinoma of rectum and sigmoid. (10) Genito-urinary diseases. (11) Disorders of the female pelvis.

REPORT OF CASES

As examples of the above, a few cases will be briefly discussed. Many patients have been seen in whom anal fissures were overlooked and who were treated with injections into the rectal mucosa without benefit. Surgery was necessary in the majority. A physician referred a patient stating that the piles had been cured, but the bleeding continued. A chronic ulcerative colitis was found and specific organism isolated. The same description may be applied to the cases of amebic colitis, although it is more common to find rectal lesions neglected because the ameba has been demonstrated or suspected. Several cases of rectal cancer have been seen which have had the injection treatment for piles. Before this method became so popular the cancer patient was frequently subjected to a hemorrhoidectomy.

Two deaths have been noted, one following hemorrhage and one septicemia, both having been treated in an advertising clinic. A farm hand was injected in a near-by town and, as a result of complications which resulted therefrom, spent many weeks in the Los Angeles County General Hospital, where he was subjected to several operations for the cure of ischiorectal and pelvirectal abscesses. It is not difficult to estimate the economic loss to the patient and to the county. Another patient had been injected in a monthly pay clinic with a resultant anal abscess. Having been impressed with the "needle" treatment, she refused proper aid and went elsewhere. An elderly woman persuaded her physician, who had previously refused, to inject prolapsed hemorrhoids, with resultant hospital confinement and operation, thus doubling her expense, which she could ill afford. A physician had been injected for external skin tags, with such consequent pain and sloughing that it was several years before he again sought relief for the primary condition of internal hemorrhoids. One rectovaginal fistula has been seen, following phenol-oil injection, and was evidently the result of overdilatation with subsequent erosion through the septum. A few cases of thrombosis of the hemorrhoidal area with thrombosis of the external veins have followed injection. Removal is usually necessary. The injudicious use of phenol in oil, or other oil combinations, has been the

cause of many rectal strictures. Many cases have been reported in the literature.¹ The oil is not absorbed and a fibrous induration results similar to that following paraffin injections for cosmetic purposes. Three cases have been referred as cancer since clinically, there is marked resemblance. One patient from another state presented this condition, and, from the history, a genito-urinary lesion was probably the cause of the symptoms referred to the rectum. Treatment should be palliative, as surgical removal of the fibrous areas has proved unsatisfactory. Colostomy has been reported as necessary in some cases.

The success in the injection treatment of varicose veins has been responsible for the injection of hemorrhoids with the same solutions, with resultant disaster. The physician overlooks the fact that the drug is deposited into connective tissue and not into the vein. One patient had been injected with sodium morrhuate for rectal bleeding, with a resultant slough and induration resembling a new-growth. Biopsy showed foreign body type of inflammatory tissue.

These cases are illustrative of many seen by the proctologist. The endeavor to minimize expense has often, as shown, materially increased the cost of the patient's illness and decreased his earning power. In the majority of instances the physician has conscientiously made the best use of his knowledge of diagnostic methods and instruments, but, unfortunately, did not obtain the desired result.

COMMENT

It is not the intent of this paper to discourage the profession from using this very important addition to medical procedure, but to point out some of the unsatisfactory results which may follow its use. The general practitioner especially should use every means at his disposal to relieve and to retain his patient as his own. The profession, as a whole, should regard rectal disease as a common and integral part of medical practice, not only from a local standpoint, but from effects which may be referred to other parts of the body. It must not be forgotten that the patient as well as the local lesion must be treated.

Where does the problem of economy enter? In that the injection treatment of internal hemorrhoids has, to a great extent, dispelled the fear which has been paramount in the mind of the sufferer of the dire consequences of surgery, namely, terrible suffering, hospitalization and loss of earning power, and the possible loss of natural function. The patient is much more willing to seek advice, knowing that others have been cured without the knife, with the result that many a trivial lesion is eradicated before it becomes dangerous. The patient is relieved, at least temporarily, with a minimum of expense and loss of time. The doctor's fee does not come secondary to a hospital bill.

On the other hand, the improper application of this treatment is prone to bring it into disrepute.

Failures and complications are bound to occur when the diagnosis and technique have been incorrect. Instead of being reduced the cost of this particular illness will be increased. Fear and mistrust may again be instilled into the mind of the sufferer, with resultant neglect and self-medication, the results of which in the past have been so difficult to overcome.

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DISCUSSION

NORMAN J. KILBOURNE, M. D. (2007 Wilshire Boulevard, Los Angeles).—A study of fifteen thousand injections, in over two thousand patients with internal hemorrhoids, made by E. T. C. Milligan of London, A. S. Morley of London, W. B. Gabriel of London, Hugh Beaton, Harlan Page, and myself, showed uniform results: not a single serious slough, two primary hemorrhages, no mortalities, and no rectal strictures. In these cases, phenolized vegetable oil was used exclusively. Such results may be obtained by eliminating errors of which I shall mention two.

The first error, in Hibernian language, is treating hemorrhoids that are something else. Doctors commonly have the idea that they can diagnose hemorrhoids by examination with the gloved finger. This is wrong. Uncomplicated internal hemorrhoids, even if large, cannot be felt by palpation, and if anything can be palpated, that proves it is *not* an uncomplicated internal hemorrhoid. Some of the things commonly palpated and treated by injections are early rectal abscesses, submucous fistulae, sessile polyps, and even the prostate gland. These are the palpable masses which, when injected, bring suffering upon both doctor and patient. I believe that certain abscesses attributed to hemorrhoid injection were present before the injection and that the injection was made into a wrongly diagnosed rectal abscess or submucous fistula. Uncomplicated internal hemorrhoids do not give pain. If a patient comes with "painful hemorrhoids" which are not badly prolapsed, the probability is a fissure tucked away high up near the grip of the sphincter, a cryptitis, or an early abscess. I am not discussing other diagnostic errors because they have been discussed in the author's paper.

A second source of trouble is a poor choice of solutions: hemorrhoids were first injected in 1869 by Morgan of St. Mercer's Hospital, Dublin, with iron per sulphate. This solution is caustic and was abandoned, but other caustic solutions are still used, notably strong solutions of phenol in oil. This solution was introduced in 1869 by the itinerant Mitchell of Illinois, originally with the deliberate intention of destroying the hemorrhoids by causing them to necrose and slough. This method, still used, frequently results in infection, secondary hemorrhage and stricture formation, and thereby brings the injection method into disrepute. A regular proctologist, Terrell of Richmond, Virginia, introduced quinin and urea hydrochlorid in 1913. Outside of small sloughs, which do occur with its use in about 5 or 10 per cent of patients, it may be used usually without harm, but improvement is temporary and, in the experience of most men, recurrence of the hemorrhoids a few months after is the rule. The Germans use alcohol, 70 per cent, after preliminary treatment by Bier's hyperemia to the hemorrhoid. They obtain excellent long-run results, but the alcohol injections are painful and cause disability for several days. Sodium morrhuate is a powerful sclerosing solution for injection inside the lumen of varicose veins. If injected into hemorrhoids, perforce in between the venous sinuses, it will cause sloughs. Not being bactericidal like phenol in oil or quinin urea, it may cause infection in the rectal wall and abscess formation. Solutions of phenol in paraffin oil cause oily tumors of the class of paraffinomas associated with rectal stricture. A weak solution of phenol in vegetable oils, such as olive oil, is a different thing. The charge that it causes oily tumors springs

¹ Rosser, Curtice: Benign Stricture of the Rectum, Tex. St. Jour. Med., (March), 1932.

from two misconceptions. Such injections are confused with paraffin oil injections. Secondly, while they do temporarily cause indurated masses, these masses disappear in a few weeks. It is entirely unfair and is likely to involve a misstatement to examine a patient recently injected with phenol in olive oil, and say he has an oily tumor. While I am in accord with the findings of Rosser in these oily tumors, and while it may be possible to find, histologically, a foreign body chronic inflammatory reaction under the mucosa for some time after their use, my experience, clinically, which I find coincides with others of long experience, fails to find complications with weak solutions of phenol in olive oil properly used. Since I finally abandoned quinin and urea about two years ago, and confined injections exclusively to phenolized olive oil. Recurrences after the use of the latter medicament seem to be exceptional and, to my knowledge, I have had no complications of even minor degree of any kind.

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M. S. WOOLF, M. D. (384 Post Street, San Francisco).—Today it is a matter of great importance that the average patient seeking medical attention should be spared unnecessary expense. The treatment of hemorrhoids by injection will accomplish this one benefit, at least. But it must be understood that not all hemorrhoids are equally susceptible to such a method. Bleeding from the hemorrhoidal area without prolapse can invariably be cured by injection and small nonprolapsing hemorrhoids also. Hemorrhoids which prolapse only at stool usually can be retained and their bleeding checked by injections although periodic reinjection may be necessary. Those which cannot be maintained for any length of time within the anal canal should not be injected. They are subject to irreducibility and strangulation and are beyond the state at which a fibrosis of the overloaded venous area would occur to the desired extent. These last, therefore, should be removed by operation. I am rather inclined to believe that in a working man even those hemorrhoids which prolapse considerably at stool only should be excised for the sake of ultimate economy of time and money.

It is rather curious that there should be so little known about which pathologic conditions in the anal region are amenable to treatment by injection. As far as hemorrhoids are concerned, neither the thrombosed type nor the marginal skin tag or external hemorrhoid can be so handled. Usually it is a laxity of the mucous membrane either in the form of a prolapse or as internal hemorrhoids which react well to injections. They are naturally of the same order. Sometimes massive injections are injected outside the rectal wall for the purpose of helping a prolapse of the entire musculature as well as the mucous membrane of the rectum. I cannot say I have had or heard encouraging results from this source.

It has not been my experience at the University of California Hospital that fissures or pruritus ani are curable by the injection of analgesics under the site of the fissure or into the subcutaneous area of a pruritic skin and, therefore, I am rather at variance with Doctor Daniel in this type of treatment for fissure and pruritus ani. Fissure is, in my mind, a surgical condition and pruritus mainly a matter of instituting correct hygiene for the part, with a treatment of the secondary eczema, and a careful use of sedatives.

Thus it will be seen that, to some of us, injections in the anal area have considerable use and benefit in the treatment of internal hemorrhoids and prolapse of the mucous membrane in children in whom as a pure sign it generally appears.

A misdiagnosis of hemorrhoids, as Doctor Daniel emphasizes, should never be made. But a view of the interior of the anal canal is necessary, especially as uncomplicated internal hemorrhoids never give actual pain. Then there will be seen through the anoscope discrete tumors of the mucous membrane, usually three, which resemble in their smoothness, congestion and circular arrangement no other pathology of anal origin.

One will readily agree with the author that the type of sclerosing agent used in the treatment of hemorrhoids is not as important as the judgment and technique of the physician employing them. Almost every expert proctologist can reckon in thousands the injections which have been given without untoward result. I am inclined to use in general a 20 per cent phenol solution in equal parts of glycerin and witchhazel, and inject a few minims into each hemorrhoid present. I prefer the lesser quantity and a stronger solution. When the prolapse is considerable, I use a 5 per cent solution in almond oil and much larger quantities to obtain a higher and more diffuse attachment of the mucous membrane. I do not use any paraffin mixture which may produce paraffinoma-like strictures and against which Doctor Daniel warns us. If this injection treatment of hemorrhoids is carried out by an expert there are no complications. On the other hand, there is a happy gain in comfort and an appreciable saving in time and money by the patient.

Hemorrhoids often co-exist with carcinoma of the rectum or colon. The symptoms of carcinoma are usually so definite and so different from those of hemorrhoids as almost to preclude the possibility of an error of diagnosis. One has only to remember that no patient must be treated or operated upon for hemorrhoids without at least a careful inquiry into the action of the bowels and a digital examination having been done.

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DUDLEY SMITH, M. D. (450 Sutter Street, San Francisco).—There are many rectal conditions usually sent to the hospital that could be equally as well treated in the office, and I am glad Doctor Daniel has again called attention to this fact. I would add to those conditions mentioned by the essayist a single prolapsing internal-external hemorrhoid associated with two other internal hemorrhoids. This condition can be taken care of in the office by taking off the internal-external hemorrhoid under local anesthesia and treating the other two hemorrhoids by the injection method, thus saving the patient both loss of time and hospital expense. We do this frequently.

Doctor Daniel mentioned useless medication. In my opinion, rectal suppositories come under this head. Not only are they useless from a therapeutic standpoint, but I indict them as responsible for the late diagnosis of many cases of rectal cancer. The laity, druggists, nurses, and, I am sorry to say, some physicians, advise patients with rectal bleeding to use suppositories. Often six months to a year has elapsed after bleeding has begun before a proper examination of the rectum is made. Bleeding from the rectum means cancer until cancer is ruled out.

THE NEUTROPENIC STATE—ITS MEDICAL ASPECTS*

By B. O. RAULSTON, M. D.
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DISCUSSION by Madison J. Keeney, M. D., Los Angeles; Ernest H. Falconer, M. D., San Francisco; William H. Barrow, M. D., San Diego.

THIS discussion deals primarily with the condition that has been designated by a number of different names, the most common of which have been "agranulocytic angina" and "primary agranulocytosis." It is almost embarrassing to place on record again statements that have been made so many times in medical literature during the last five years. If such repetition can be justified, it is by bringing together in compact form

* Read before the General Medicine Section of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

some of the information that has been accumulated, and attempting to present some phases of the problem in such a manner as to stimulate more intensive study of the condition when it is encountered.

CONFUSING NOMENCLATURE

Progress in solution of the problem involved in this disease has been definitely retarded by the frequent confusion of the condition with others that in one way or another resemble it closely, but which are fundamentally different. It is thus that the results of various forms of management lead to erroneous conclusions concerning their efficacy and the possible etiology of the disease. It is probable that if the charts of patients indexed as having "agranulocytic angina" in the average hospital are examined carefully it will be found that half of them suffered from some other condition, but were critically ill and had a leukopenia and a neutropenia.

For a description of this condition one may say that many authors have designated it as one that is most prevalent in women of middle age and most common in Caucasians in America and Germany; but there are great variations from this rule. One of the recent reports is the record of a middle-aged Chinaman in Java,¹ who presented the typical picture and died. A late addition to the variety of factors that precede a condition resembling closely primary agranulocytic angina is that reported by Jacobson and Abel.² Two of their patients, middle-aged men, who were inoculated with malaria as treatment for tertiary syphilis, developed the typical clinical picture, with leukocyte counts of 1,600 and 2,000, respectively, and one per cent of neutrophils. They were treated with quinin and neosalvarsan, and each recovered. In many instances a condition closely resembling that under consideration has followed the use of arsenicals in the treatment of syphilis.

SYMPTOMS OF PRIMARY AGRANULOCYTOSIS

The condition accepted as primary agranulocytosis is characterized by rapidly developing prostration, fever, necrotic ulcerations of the mucous membranes, leukopenia and neutropenia, with little or no change of red cells, blood platelets or hemoglobin, with normal lymphocytes, and in many instances characteristic response to certain drugs. It progresses rapidly, and the mortality rate has been very high. An excellent discussion of this disease by Osgood¹⁴ deals especially with differential diagnosis, pathogenesis, and some forms of treatment. Differentiation from poisoning by benzol, or the result of arsenical therapy, may depend entirely upon an accurate history, while expert opinion of the morphology of the blood may be the only means of ruling out leukemia, aplastic and splenic anemias, granulocytomata, severe sepsis, and overwhelming infections.

ETIOLOGIC FACTORS

Granted that by great care one can separate these patients into a distinct group, the important

questions that arise concerning them are, what is the cause of the disease, what is the mechanism by which it is produced, and what may be done to reduce the high mortality that has resulted from it? Even an approach to a definite positive answer to the first question has not been found in the literature. Attempts to produce a similar condition by injections of bacteria³ and of benzene^{4,5} have been of interest, but while the results obtained throw some light on the problem, its solution remains for the future. The lesions in the mucous membranes were formerly thought to represent a peculiar type of infection that produced the disease. It is now established that similar lesions appear in patients with neutropenia from any cause, or may be absent when neutropenia exists; that leukopenia and neutropenia may precede the ulceration,^{5,6} and that the varieties of organisms found in the ulcers and adjacent tissues are those usually present and not pathogenic when the blood count is normal.

MECHANISM OF PRODUCTION

These statements apply directly in a consideration of the mechanism by which this condition is produced. There appears to be rather uniform agreement among those who have studied it most, that the primary factor in the condition's development is the disappearance of polynuclear leukocytes from the blood stream. The possible explanations of their disappearance are evident. Destruction alone, or the storage of these cells in special tissues, may be easily ruled out as an important factor. It may be assumed that those cells in the bone marrow from which the neutrophils develop are present, are capable of normal function and do actually produce the cells which when mature are neutrophilic polynuclear leukocytes, but that some abnormal substance is present which prevents the further development of these cells, or that some substance is absent which is necessary for completion of the process. By the same reasoning it may be considered possible that the primary mother cell in the marrow ceases entirely to function for the time.

Some of the consequences of the disappearance of polynuclear leukocytes from the blood may be predicted from our knowledge of the functions of these cells. They are credited with having phagocytic powers, and with special ability to remove in this manner micro-organisms from the blood stream and especially from the tissues. They are said to be at least concerned in the development of immune bodies, as agglutinins, precipitins, and lysins. They probably are important factors in the production of many ferments and enzymes.

It is important to note also that if the length of life of the mature neutrophil that reaches the blood stream is from four to six days, the bone marrow must be continuously active in their production under normal conditions, and capable of greatly increasing their numbers when the body defenses are called upon to meet a new or extended enemy.

RESULTS ON THE POLYNUCLEAR LEUKOCYTES

Whether it is considered that the formed elements of the blood, except lymphocytes, develop from one common cell, or more than one, it appears that the offending agent in this disease has the highly selective quality of arresting the maturation of polynuclear leukocytes. When these cells have been greatly reduced in number, after extensive local infection has developed in the mucous membranes and fever has reached a high level, only mature forms of polynuclears are found in the peripheral blood. In the leukopenia and neutropenia present in certain forms of severe sepsis where there may be increased destruction of cells, or even interference with the production of neutrophils, young forms of polynuclears are found in the blood stream. If in the type of neutropenia under discussion the chief factor were destruction of the special type of cell in the peripheral blood, without some primary damage in the production of these cells, and even if the process of replacement of cells should lag far behind the requirement to maintain a normal count, there should not be even a predominance of mature cells, and practically no young forms of this type. Examination of the bone marrow at the time of appearance of acute symptoms⁴ reveals a reduction in the number of cells of the myeloid series and hypoplasia of myelopoietic tissue. Autopsy reports indicate a greater degree of the same type of destruction.⁷ There is also the fact that in a high percentage of these patients the bone marrow responds to injections of nucleinates by producing polynuclear leukocytes, young forms predominating at first, with finally the normal mature forms in the peripheral blood.

PATHOLOGIC CHANGES

It appears, then, that in this disease some process prevents the maturation of a certain type of leukocyte, or that some substance necessary for the normal development of this type of cell is absent. In consideration of the first of these possibilities it may be said that, whereas the causative agent in the early stage of the disease appears to single out the development of neutrophils, it is to be remembered that in patients who do not die relatively soon after the onset of symptoms there is evidence that the process involves the development of all elements coming from the bone marrow. The contention may be made that this extension is the result of infection that has developed by virtue of the absence, or greatly reduced numbers of neutrophils in the blood. The subicteric condition that develops in those patients who do not die early has been taken to indicate increased red cell destruction.⁸ When it is observed that in patients with profound leukopenia and neutropenia a bone marrow response can be obtained that results in the sending out of a new crop of neutrophils as a result of injecting products of nucleic acid, one may consider that the nucleinate has either neutralized the effect of a substance which prevented the development of these cells, or that it has supplied some factor that was missing and which is necessary for their

development. From this point of view it might be argued that this whole process is the result of a vicious cycle that starts with decreased production of neutrophils. This means decrease in the number of these cells to be destroyed normally in the blood and tissues, and therefore liberation of smaller amounts of nuclear substance to be absorbed and distributed as such, and which may be looked upon as a necessary stimulus in the production of neutrophils in the bone marrow. When, as a result of this process, the number of these cells in the blood stream has been reduced to a certain level, micro-organisms, ever present, are no longer held in abeyance by the protective action of polynuclear leukocytes, become destructive and, by invading the tissues of the body, produce the fulminating symptoms seen in the acute stages of the disease. While this is highly speculative, it is justified as such in view of what is to be said concerning treatment.

TREATMENT

As would be expected in the treatment of a condition concerning which so little is known as to etiology, many efforts of a purely empirical nature have been made. With the hope of stimulating the bone marrow, the x-ray has been applied over the bones, and reports indicate that in this way the mortality rate in some groups of patients has been definitely lowered.⁹ Blood transfusions have been used extensively, and may have prolonged life in some instances; but there is little if any indication that they have influenced the final results of the disease. Jackson⁹ advises against this method of treatment. Drugs, aside from those related to the nucleinates, have been of little or no value.

In estimating the results of any form of treatment, it is to be remembered that apparently there are fairly frequent spontaneous remissions, and that following this or the recovery associated with some form of treatment, a considerable number of patients have a recurrence of the disease fully as severe as the previous attack and from which they frequently die.

From a study of the work of Jackson and his associates,^{9,10,11} Doan^{6,12} and Reznikoff,¹³ it appears that they have made use of a common principle, the most rational and most successful form of treatment thus far applied to this condition. With larger and more frequent doses of their respective substances, these workers have been able to reduce the mortality in their groups of patients to an average of about 30 per cent, which is approximately half of the rate reported from groups treated by x-ray and one-third of that in groups treated symptomatically. Reznikoff¹³ now recommends intravenous injection of 1.0 gram of adenin sulphate three times a day during the first three days of treatment. The drug is boiled in from 35 to 40 cubic centimeters of physiological salt solution, cooled to body temperature and injected slowly. "As much as 10.4 grams was given to one patient, within ten days, with no apparent ill effect." Of fifteen patients with primary agranulocytosis so treated, eleven recovered.

In the use of pentnucleotid (N. N. R.), Jackson⁹ gives 10 cubic centimeters intramuscularly twice daily until the leukocyte count has definitely risen, then once daily until the count has remained normal several days. It is recommended that double these amounts may be given in severe situations for a period of four days, then 10 cubic centimeters twice daily until a definite rise occurs, and thereafter daily until a normal count is obtained. In these observations it was noted that an increase of leukocytes in the blood did not occur until the third or, more frequently, the fifth day of treatment. The regularity with which this effect appeared at a given time after treatment was instituted is considered as evidence in favor of a specific effect of the nucleotide. The appearance of young forms of polynuclear leukocytes following the fifth day of treatment, and after this the development of actual abscesses about the site of necrotic ulcers that had developed preceding treatment in some patients, may also be considered as indicating the ability of nucleotides to call forth neutrophils capable of proceeding at once to an important normal function of these cells, namely, the destruction of bacteria in tissues. In a report of the results obtained in the treatment of eighty patients with pentnucleotide the mortality is given as 30 per cent.

Doan's experimental study of normal rabbits¹² and his use of nucleotides in the treatment of patients with primary agranulocytosis⁶ have given much the same results as those reported by Jackson. His studies are well worth careful examination. The effect of nuclear substances upon the bone marrow probably accounts for the leukocytosis associated with processes that produce tissue destruction. Extensive tissue destruction, with the consequent liberation of nuclear substance in patients with primary agranulocytosis, might be looked upon as a favorable condition. The recovery of a patient with an extensive slough in the right side of the neck, producing a fistula of the esophagus that opened at the base of the neck, has been called to the author's attention. Records of patients who have recovered without treatment with nucleotides or related substances would afford interesting information bearing upon this possible relationship.

Emphasis should be placed upon the fact that these workers have selected patients in whom the diagnosis was established by most careful study and have treated them by the one method, thus avoiding the confusion that arises when various forms of treatment are applied to the same patient. It is of interest to note that Harkins⁵ produced leukopenia and granulopenia in rabbits by injection of benzol in oil, and was unable to influence the leukocyte count in these animals by the injection of nucleotides.

Attention has been directed to the importance of great care in local treatment of ulcers in mucous membranes in this condition. Jackson especially stresses the danger of increasing the spread of infection if local treatment produces mechanical injury.

COMMENT

No attempt has been made in this study to review all the literature dealing with the subject. Although most of this has appeared during the last five years, there are already a few hundred articles concerning it. Excellent bibliographies may be found in the publications referred to here, especially those by Kracke⁷ and in Naegeli's text.⁸

In an effort to add some item of interest to the literature, the author reviewed the hospital records of seven patients who had apparently fulfilled the requirements for a diagnosis of primary agranulocytic angina. Three of these had been seen in consultation, and all had careful hospital study. There is nothing to be gained by presenting an extensive detailed account of their records here, but some general statements may be worth while. Six of the seven were women whose ages varied from twenty-six to sixty-five years; the age of the one man was fifty-three years. The clinical picture presented was the usual one of lassitude, fatigue and exhaustion, high fever, and each patient had ulcerations in the mucous membranes of the mouth or pharynx. One patient, a 26-year-old woman, had been ill twelve days before she came to the hospital. Her temperature was 104, the leukocyte count 5,800 with no polynuclears. The leukocyte count in the other six instances varied from 200 to 2,000, and the percentage of polynuclears from 0 to 30. Treatment consisted of local applications to the ulcerations and general supportive measures, including blood transfusions. All the patients died and autopsy was done on five of them. Absence of polynuclear cells in the tissues about the ulcerations, and in the bone marrow few or no cells of the myelocytic series, with marked softening and yellowish discoloration of the marrow, were the important abnormalities found at autopsy.

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DISCUSSION

MADISON J. KEENEY, M. D. (834 Pacific Mutual Building, Los Angeles).—The neutropenic state has been the source of a great amount of study and conjecture since Schulz and his associates published their articles under the titles of "Agranulocytic Angina and Agranulocytosis." Later observations have shown that some of their original conclusions were probably wrong, but in the main the clinical picture is fairly uniform.

Review of numerous case reports and papers published in the past few years convinces one that many other conditions in which a neutropenia is found have been described as true idiopathic granulopenia. A number of well-known clinicians have stated that this condition is not a disease entity, but a syndrome common to many diseases. This may be true; but after seeing a number of cases of the fulminating type, without evidence of preceding sepsis, one is forced to the conclusion that they have a strong family resemblance—the clinical picture of the acute cases is a definite one.

Many well-known diseases are associated with a leukopenia and granulopenia, and, as Doctor Raulston has pointed out, a few may at times cause great difficulty in differential diagnosis. The neutropenia of sepsis occasionally gives the same clinical picture, but the source of the overpowering infection is usually evident and precedes the leukopenia. Aplastic anemia in the later stages and the leukopenia stage of acute leukemia may require the services of a competent hematologist to differentiate.

The ulceronecrotic lesions in the throat and mouth may be the outstanding symptoms in agranulocytosis, and be mistaken for diphtheria, Vincent's, or other mucous membrane lesions. We had the experience of having the culture from the throat of a fulminating case returned marked positive for diphtheria. Further studies of smears and cultures showed the organism to be the *Bacillus pyocyaneus*. The white count in this case was 400 with no granulocytes. It is unnecessary to mention the need for a prompt blood count in all ulceronecrotic lesions of mucous membranes.

The etiology of idiopathic granulopenia is still unsolved, and if due to a specific infection the offending organism has not been isolated. Jackson says, "The best evidence points to some recurring blood dyscrasia of the bone marrow of such a nature as to produce a primary leukopenia—probably a temporary paralysis of the white cell maturation factor."

Treatment of the less virulent cases by pentonucleotides has given encouraging results, but the malignant type has an extremely high death rate.

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ERNEST H. FALCONER, M. D. (384 Post Street, San Francisco).—Doctor Raulston has summarized very well our present knowledge of the neutropenic state, and has also set forth some of the problems still to be solved. I feel that there is little further to be said at this time. I should like, however, to mention one or two questions that have been raised in connection with this condition. We are frequently asked by students, "Are we dealing with an entirely new syndrome, or has this so-called malignant neutropenia been with us always and not recognized?"

It seems difficult to believe that we are dealing with a new disease entity—what happened to the earlier, unrecognized cases; did they all die? The problem is being attacked now experimentally, as Doctor Raulston points out, both by animal inoculation with organisms (*Salmonella* group) and with chemical agents, as benzol. Some features of the more fulminating cases

suggest a virus disease. A virus may show selectivity for certain cells and stimulate cellular division, or it may cause rapid cellular degeneration. Culture of the marrow for virus growth and inoculation experiments will probably be attempted in the near future.

The results of nucleotides and related substances in treatment is on a sufficiently rational basis to warrant their use without delay. They should be used with every care as to the proper technique of administration and dosage. On the basis of the liver damage which the more acute cases show, we have been using one to two liters of 10 per cent glucose solution, intravenously, each twenty-four hours.

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WILLIAM H. BARROW, M. D. (1400 Medico-Dental Building, San Diego).—Doctor Raulston has given a comprehensive review of the known and accepted facts in regard to this syndrome, and leaves little for discussion other than conjecture in regard to proper classification and etiology. It would seem that Doctor Raulston may be insisting on too rigid a limitation in the classification of the reported cases. Until we know the etiology and can classify cases accordingly, there probably must be some variation in the accepted symptomatology of the disease. The acute leukemias, which constitute a definite entity, do not present a uniform symptomatology in different cases, and similarly it might be expected that there would be cases of agranulocytic angina or, as it is more properly called, granulocytopenia with marked differences in the degree of anemia, in the monocyte count, in the severity of the oral sepsis or hemorrhage, and in the presence or absence of jaundice. The essential factor in the diagnosis of the disease is the presence of a disturbance of the granulopoietic bone-marrow tissue, and a consequent disappearance of granular leukocytes from the blood stream. Doctor Raulston intimates that the cases which occur following antisyphilitic treatment are not true examples of granulocytopenia. Nevertheless such cases have been reported in the literature and they present all of the morphological and pathological characteristics of the disease. Two of my own cases were almost identical symptomatically. One of these patients had been on arsenical therapy and the other had not. Both had a leukopenia with almost no polymorphonuclears, but the patient who had been on antisyphilitic treatment had a severe secondary anemia with a hemoglobin of twenty-five, and a red count of one and one-half million; whereas the second had a normal hemoglobin and red count. In view of the parallelism otherwise of the two cases, it would seem logical to presume that they were slightly different manifestations of the same process, and that the arsenical had precipitated a dyscrasia which in other cases was idiopathic.

It has been shown that the myeloblastic function of the bone marrow is stimulated by the chemotactic effect of the disintegrating white cells in the blood stream, and the effectiveness of nucleotide therapy in the treatment of the disease is thus explained. There are other indications that the disturbance is biochemical rather than due to an overwhelming infection, as was at one time supposed to be possible. In view of this it is perhaps not presumptuous to believe that the disease is due to a chemical imbalance which might readily be brought about by the introduction of foreign metals, as well as by some internal disturbance of the normal mechanism. It is interesting that fever, which we have usually associated with infection, is apparently due in these cases to some metabolic or chemical disturbance rather than to the infection which manifests itself secondarily.

It may be of practical importance to voice a warning against too hasty radical treatment of oral infection without first ruling out the possibility of a granulopenia or other blood dyscrasia. One can well imagine one of these patients in the early stages of the disease, with the usual symptoms of malaise and of soreness of the gingival tissues, being subjected to more or less extensive dental or prophylactic work, when the leukopenia and consequent depleted resistance warrant only the most conservative treatment.

PSYCHIC FACTORS IN ANESTHESIA*

By HENRY G. MEHRTENS, M. D.†

AND

PEARL S. POUPPIRT, M. D.

San Francisco

DISCUSSION by Samuel Ingham, M. D., Los Angeles;
Melvin R. Somers, M. D., San Francisco.

THE psychic factors in anesthesia could not receive adequate recognition as long as the medical profession considered body and mind as separate clinical entities. It was early noted that individuals operated upon in states of panic or depression were poor risks, and both surgeon and anesthetist attempted to avoid such dangerous situations. Later, when the effects of the emotions upon the body were studied, it became obvious that in the emotions we have a most potent factor which can influence for good or evil any phase of bodily metabolism. So much is this so that it can hardly be overstating the case to say that placing the patient in the optimum psychic state ranks with the other essential preparations for operation, or even with the skillfulness of the operator, as far as a successful result is concerned.

IMPORTANCE OF PSYCHIC ADJUSTMENT

The medical profession has come to realize that a completely satisfactory operation with the best of surgical technique is only part of the problem involved when an individual is found to have a condition which necessitates surgical intervention. In spite of having an accurate surgical diagnosis, an expert and satisfactory surgical procedure and an uncomplicated convalescence, there are far too many patients who are incapacitated, some only temporarily, but others permanently, because of failure to adjust psychically following the operation. This maladjustment may take the form of either a neurosis or a psychosis.

Here the anesthetist and surgeon show what is being demonstrated in every other department of medicine, namely, that the patient is an indivisible whole; that no psychic disturbance can take place without a corresponding somatic reaction. Therefore psychic trauma takes its place together with trauma of tissues, in the undesirable factors of any operation. In order that the patient may go through a surgical operation with the optimum chances of being restored to complete normality, there must be perfect teamwork between the internist, the surgeon, and the anesthetist—also the nurse. Perhaps in the ideal team every member must be familiar with the individual situation to be met, and must work with every other member; not only to do nothing harmful or tending to introduce ideas at variance with the policy of the whole, but that each should contribute personally to the mental attitude deemed necessary by the team.

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* Read before the Anesthesiology Section of the California Medical Association, at the sixty-second annual session, Del Monte, April 24-27, 1933.

† Deceased.

RÔLE OF THE ANESTHETIST

However, it frequently happens that much of the responsibility falls on the anesthetist. To the members of this specialty there is apparent the most obvious necessity of including the psychic needs. The anesthetist was quick to see the advantage of working with a quiet, relaxed and confident patient, and in order to produce such a situation the preliminary visits were introduced. During these visits much more than a routine check-up of heart, lungs, blood pressure, and urine were accomplished. The confidence of the patient was secured, and in the chats that preceded operation many a misconception of anesthesia and surgery were discarded and corrected. Occasionally the residual of a particularly disagreeable previous anesthetic experience has been erased by means of the rapport between the patient and anesthetist developed during these periods. This emotional reaction of the patient toward the anesthetist at this time is analogous to the psychic transference which psychiatrists have long recognized as necessary before effective work can be done.

PREOPERATIVE SEDATIVES

The preoperative sedative was welcomed by the anesthetist as a step in the direction of the production of a calm, confident patient at the beginning of anesthesia; and it is much to the credit of the anesthetist that preoperative sedatives have never been used in a careless fashion. A sedative has never been expected to take the place of understanding, psychic transference. Anesthetists knew full well what we in psychiatry daily experience, that you cannot rid a patient of fears by sedatives alone, nor is it possible to put a panic-stricken patient to sleep with ordinary doses of sedatives.

Unwisely administered sedatives sometimes defeat their own purpose. It is not an uncommon experience to observe a patient who previously presented an outward calm, become very excited and even difficult to manage after mild sedation, or in the early stages of anesthesia. In fact the excited phase in the early stages of anesthesia, which has been ascribed to the stimulating action of the anesthetic agent, may frequently be due to an abeyance of the psychic inhibitory mechanism which has been responsible for the appearance of outward calm. The conscious control which the patient has over his fears is removed by the sedation or anesthetic, and considerable psychic trauma to the patient results from the measures which are necessarily employed to control him.

It is important to understand the make-up of the individual, his habitual reaction to unpleasant happenings, and to know, in as much detail as possible, the situation which exists in every aspect of the patient's life at the time. Only then can the preoperative sedative be intelligently chosen, bearing in mind personal idiosyncrasies.

CHOICE OF ANESTHETICS

The choice of anesthetics cannot be made without some reference to the temperament of the

patient. Only too frequently a decision is made on too narrow a basis. This is well demonstrated in the choice between local, spinal, or general anesthetics. The apprehensive, imaginative, hysterical patient should be guarded against additional psychic trauma incident to being fully alert to the formidable preparations in the operating room, and to the emergencies and unguarded remarks of the personnel. To other less imaginative types these incidents work no hardship.

OTHER FACTORS

The anesthetist has been mainly responsible for that critical period between the time the patient leaves his room and the time the operation is started. Of all the psychic difficulties the patient must meet, the greatest is delay, which saps his confidence and raises his tension. This delay may be occasioned by poor judgment in scheduling operations on the part of the operating room nurse, or it may be due to the anxiety of the surgeon that not a minute's time be lost between the finishing of one operation and the starting of another. No matter what the cause, the delay is a grave injustice to the patient, and is later related by him as one of the most harrowing incidents of the operation. In these situations the anesthetist is acutely aware of the damage that is being done, but is powerless to speed matters up. They are entirely preventable in most instances, and can be avoided by the complete coöperation of the head operating room nurse, the anesthetist, and the surgeon in placing the protection of the patient's interests ahead of any personal convenience.

Perhaps there are few human relationships fraught with such important consequences as that between the anxious, frightened patient, and the anesthetist. Loss of consciousness for many—apart from the anticipated surgery—is a terrifying thought. This is the time when the patient reaches out for the comfort and sustaining power of the parent. Here the anesthetist for a short while takes the place of the parent, and tides the patient over the crisis.

Imagine at this juncture what a mechanical, chilly, anxious or hurried attitude would mean in terms of psychic trauma, which may in turn affect postoperative shock. Yet, from the reports given the psychiatrist, such unskillful or thoughtless treatment is not of infrequent occurrence. Its effect on the more sensitive outlives the operation, and may persist for a long period of time. To avoid these complications we need not only skilled technical training, but a breadth of sympathy and understanding that taxes the capacity of everything that medical education and experience ordinarily supply.

It is well known that the optimum time for receiving either positive or negative suggestion is when an individual is under mild sedation, in the early stages of anesthesia or when, thoroughly frightened, he consults someone in whom he has confidence. Therefore the anesthetist is in a position to erase previous suggestions, and introduce new ones which may well be lasting. It is not easy

to overemphasize the good results which may follow properly applied psychotherapy at this period, and it is difficult to overestimate the damage which may be done by an untrained individual.

CONCLUSION

You may well ask how such physiological, pharmaceutical, and psychological knowledge, combined with the experience and personality required to make them acceptable, can be found in any large group of individuals. It is true that they are not to be found in great numbers in the medical profession, and it is not reasonable to search for them outside of the medical profession. But these qualities do occur in our leaders of the anesthetic specialty. We may say, therefore, that mere skill in handling a gas machine and the ability to bring a patient through a severe operation alive, does not make an anesthetist. Inasmuch as medicine can never be artificially divided into the medicine of the body and the medicine of the mind, just so a properly equipped anesthetist must be a well-rounded physician who is just as alert to the psychic needs of the patient as he is anxious for the technical improvements of anesthesia.

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DISCUSSION

SAMUEL INGHAM, M. D. (727 West Seventh Street, Los Angeles).—Although the facts presented in this paper are incontestable and generally known, it still happens that patients frequently go to the operation table suffering unnecessarily from fear and apprehension. As the authors have emphasized, it is not simply a matter of making the patient suffer as little as possible, although that is an important consideration. The apprehensions and fears suffered by the patient are accompanied by widespread somatic reactions, actuated through the vegetative nervous system and consisting of important changes in the cardiac, vasomotor, endocrine and metabolic functions of the entire organism. These reactions follow definite patterns, tending to depletion of the reserves of vitality and increasing the possibility of surgical shock. This has been particularly well demonstrated innumerable times in cases of operation on the thyroid gland for exophthalmic goiter. Practical means of avoiding unnecessary apprehensions and fears on the part of the patient obviously depend upon the coöperation between all of the physicians and nurses coming in contact with the patient.

The psychologic and physiologic principles involved concern not only the anesthesia and surgery, but the entire field of medicine. Most people who are sick, from whatever cause, incidentally suffer from depressed and disturbed emotions and, coincidentally, from the accompanying physiologic and metabolic reactions. It is a part of the physician's responsibility to analyze each patient in regard to his reactions to his illness and other disturbing personal problems, and to promote as far as possible a hopeful and optimistic attitude.

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MELVIN R. SOMERS, M. D. (Stanford University Hospital, San Francisco).—The authors have touched upon many psychic factors in anesthesia which are often overlooked, and the importance of which can best be appreciated when one sees these patients return with postoperative neuroses or for a second operation. A consideration of the age and personality of the anesthetist, in the choice for the individual patient, is a point too often given no consideration. As the authors have brought out, the psychic reaction of a

person undergoing a terrifying experience is to turn to the parent for guidance and reassurance. The anesthetist assumes this rôle, and if his personality is such that it fits in with the patient's previous psychic fixations, his power is greatly augmented. For example: A father-fixated woman usually finds it much easier to place her confidence in a middle-aged, fatherly appearing male, and frequently has difficulty in adjusting to a young woman. The physical and personality traits of the child's mother must be considered in choosing the anesthetist of an adolescent or younger child. In this connection we must not forget that the feminine protest so common in middle-aged American men would be more easily handled by a male.

Another point of great value is the care with which the operating team and nursing staff must guard their chance remarks during the critical periods of the induction of anesthesia, and just preceding the regaining of full consciousness. Unguarded remarks at these times reach the patient in a mood extremely favorable for suggestion, and the ill effects of unfavorable suggestion may not be evident for some weeks. The psychic difficulties engendered are often not seen by the surgeon, and their causes are only uncovered by painstaking and costly psychic investigation. There is a very fertile field for favorable psychic suggestion during the preanesthetic stage of anesthesia, especially if this be prolonged by preoperative sedation. If the extremely favorable psychic state a patient can be thrown into by kindly and hopeful suggestion at this stage were generally appreciated, fewer psychic complications would be encountered during convalescence. I hope that at a future date the many factors just touched upon by the authors will be further elaborated, for I am sure that when these factors are considered, the art of anesthesia will progress in ways as yet impossible by the pharmacologic approach.

MIXTURE OF NOVOCAIN AND NUPERCAIN IN INTRADURAL BLOCK (SPINAL) ANESTHESIA*

By HALL G. HOLDER, M. D.
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DISCUSSION by Edmund Butler, M. D., San Francisco;
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EXPERIMENTAL work which has been confirmed from different sources has shown that blood-pressure fall after the administration of spinal anesthesia is not due to splanchnic dilation, but is mainly cardiac. Paralysis of the intercostal and phrenic nerves interferes with normal chest expansion and diaphragmatic excursion, causing stasis of blood in the right heart and its tributaries. The proper use of ephedrin is an important preventive measure against excessive fall in blood pressure. Early recognition of too high anesthesia (loss of epicritic and protopathic sensation above the level of the sixth rib) and immediate institution of proper carbon dioxide and oxygen therapy prevents serious complications. Proper selection of cases so as to exclude those presenting advanced degenerative changes in the cardiovascular system is a most important precaution. The poor risk patient, due to degenerative changes in any vital organ, especially those with myocardial degeneration with or without hypertension, represents the principal contraindication to this anesthetic. Cases of hypotension *per se* are not bad

risks, but, on the contrary, do exceptionally well under spinal anesthesia. Traumatic and hemorrhagic shock remains definitely a contraindication.

DOSAGE IN SPINAL ANESTHESIA

It is a known fact that a certain minimum dosage of any of the common agents in use for spinal anesthesia is sufficient to produce adequate anesthesia, the height depending primarily on the amount of spinal fluid removed and reinjected. Contrary to the published belief of many, increase in dosage does not materially affect the height or duration of the anesthetic, but definitely increases the hazard of uncontrollable complications.

Similarly prepared solutions of specific gravities different from that of spinal fluid are used, supposedly to control height and length of anesthesia. I have never been able to duplicate the results claimed for these solutions, and I feel that they possess no advantages over the novocain crystals dissolved in spinal fluid. Anesthesia of forty-five minutes to one hour duration may be expected with the use of novocain. This not infrequently requires some supplemental inhalation anesthesia toward the close of the operative procedure, often deep anesthesia to close the peritoneum in laparotomies. This always causes delay, but more particularly added shock, which is a distinct hazard for the patient.

NUPERCAIN

With the idea of overcoming this hazard by the use of novocain, I previously observed a series of cases¹ in which nupercain was administered. (Nupercain or percain has been satisfactorily reported as producing prolonged anesthesia in the dosage of two cubic centimeters of a 1:200 solution in physiological saline. In this great dilution its effects are nontoxic.) An analysis of the series in which nupercain was administered, as compared with a previous series² given, novocain crystals yielded the following conclusions:

1. Nupercain is a safe and satisfactory agent for spinal anesthesia when used for operations below the diaphragm.
2. It has the following disadvantages as compared with procain crystals: (a) Lengthened period of onset of anesthesia following administration. (b) Definitely greater tendency to post-anesthetic headache.
3. It has the following advantages as compared with procain crystals: less variation in individual susceptibility to the drug; less nausea, vomiting, and subjective symptoms because of the better sustained blood-pressure level; less blood-pressure fall and more constant level after the initial drop; sufficient length of anesthesia with the average nontoxic dose for all operative procedures, the markedly lengthened analgesia promoting greater immediate postoperative comfort for the patient.

With the above information at hand I became interested in learning if a suitable combination of novocain and nupercain could be effected so as to derive the major advantages from both and perhaps by such a combination do away with some of the disadvantages of each.

* A preliminary report. Submitted January 6, 1933.

TECHNIQUE OF ADMINISTRATION

In a patient properly prepared for spinal anesthesia, *i. e.*, proper sedation before coming to the operating room, with the administration of 50 milligrams of ephedrin in lower abdominal cases and 100 milligrams in upper abdominal cases fifteen minutes before lumbar puncture, the lumbar tap is made with a fine-gauge needle in the second or third lumbar space. Details of the proper posture of the patient in the lateral position to facilitate an accurate spinal tap are adhered to as outlined by Huff.³

Fifty milligrams of novocain crystals are dissolved in two cubic centimeters of 1:200 nupercain solution. A ten cubic centimeter syringe containing this mixture is attached to the spinal needle and a sufficient quantity of spinal fluid aspirated to obtain the desired height of anesthesia after the well-known volume control technique.

Following administration the patient is placed in a moderate Trendelenburg position, watched and entertained, the height of anesthesia carefully determined, frequent blood pressure determinations made, and toxic symptoms of too high anesthesia or too great blood-pressure fall controlled immediately.

One feature I particularly insist upon is the giving of very light gas anesthesia if the patient is fretful or nervous about being conscious of his surroundings. This comforts the nervous type of patient and in no way complicates the anesthesia. In fact the giving of a proper amount of oxygen is provided, and the surgeon has the advantages of the regional anesthesia for his work. I think it is wrong to insist on consciousness in these patients. If awake the patient should not be narcotized to the extent that he is unable to cooperate in the necessary breathing exercises.

Following operation, the patient is kept flat in bed for twenty-four hours to minimize the possibility of postanesthetic headache. The postoperative advantages to the patient administered spinal anesthesia are known and need no reiteration.

ANALYSIS OF RESULTS

This study comprises seventy-four cases personally anesthetized and operated, representing surgical procedures on the stomach, colon, and biliary tract in the upper abdomen, hernia, appendix, prostate and female generative organs, many combined abdominal and perineal operations in the lower abdomen.

Of the seventy-four cases, forty-four, or 59 per cent, showed an average fall of systolic blood pressure of 20.4 millimeters; fourteen cases, or 18 per cent, were stabilized without fall or elevation; while sixteen, or 21 per cent, showed an average elevation of blood pressure from the pre-anesthetic level of 23.6 millimeters.

In the series given nupercain alone, the average fall of systolic blood pressure was 17.3 millimeters. This corresponds almost exactly with Keyes' ⁴ figure of 18 millimeters for his series, which he compares with a series of cases given novocain crystals in which there was an average drop of

31 millimeters, and a further drop of 39 millimeters in another group administered spinocain. It is evident, therefore, that the addition of 50 milligrams of novocain to the average dose of nupercain does not materially alter the average blood-pressure fall. Furthermore, careful graphic records demonstrated that the typical nupercain curve still predominated, *i. e.*, an immediate but diminished fall in blood pressure with a constant maintenance of the low level until the blood pressure begins gradually to return to normal. With the use of novocain and spinocain original blood-pressure fall is more gradual, the lowest point being reached in about one-half hour, with further subsequent drops not uncommon. Thus with the typical nupercain reaction, as compared with novocain, late reactions in the form of nausea and vomiting due to delayed fall in blood pressure need not be expected to disturb the operative procedure.

Failure to obtain anesthesia did not occur with the novocain-nupercain mixture. Furthermore, almost immediate anesthesia was obtained as with the use of novocain alone, obviating the delay of ten to fifteen minutes experienced when nupercain was the sole agent. No change was noted in the average duration of nupercain anesthesia, the period being from three to five hours, with partial anesthesia for a much longer time. The feature of lengthened analgesia contributes in no small way to the comfort of the patient in the immediate postoperative period, especially if morphin and sodium amytal are given before the anesthetic effect of the nupercain is allowed to wear off completely.

There were few subjective symptoms during the anesthesia, occasionally slight nausea, notably less than with novocain, as personal susceptibility to nupercain is negligible. Curiously enough, post-anesthetic headache occurred with the novocain-nupercain mixture in only 3 per cent of cases as compared with 6 per cent in the nupercain series, and 1.9 per cent in the group administered novocain crystals. In those instances where headache developed, it was checked immediately by the intravenous use of caffein sodium benzoate, this therapy being apparently a specific for this complication.

CONCLUSIONS

1. Novocain-nupercain mixture in the proportion of 50 milligrams of novocain to two cubic centimeters 1:200 nupercain solution is a safe agent for intradural block anesthesia.

2. In this dosage and combination are derived the major advantages of each agent; these advantages being:

(a) Lengthened period of anesthesia and analgesia sufficient for all operative procedures characteristic of nupercain.

(b) Immediate anesthesia as with novocain crystals.

(c) Less blood-pressure drop with maintenance of a constant level giving fewer subjective symptoms during anesthesia, due to a decrease in individual susceptibility to the effects of nupercain.

(d) A 50 per cent decrease in postanesthetic headache as compared with the use of nupercain alone.

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DISCUSSION*

EDMUND BUTLER, M. D. (490 Post Street, San Francisco).—I have not had sufficient experience with a solution of novocain and nupercain in intradural block to be able to recommend or discourage its use. Doctor Holder's claims are reasonable. The decrease in the fall of blood pressure and the greatly lengthened period of the analgesia are qualities much desired. I am convinced if these qualities prove to be constant over a large series and no serious disadvantages develop, the novocain and nupercain solution will soon be generally used. I feel very definitely the use of intradural block is contraindicated in patients who have any history of myocardial weakness or of coronary sclerosis.

Slightly in disagreement with Doctor Holder, I do not believe that shock is a contraindication to intradural block. If the blood vessels are elastic and the myocardium is normal, the shocked patient is just as safe, in my opinion, under intradural block as under any anesthesia. In gunshot wounds of the abdomen, perforated ulcer and perforated appendicitis with general peritonitis, the operator is able to work much more speedily aided by complete relaxation. Some surgeons have reported a lessened mortality when using subdural block in the above type of cases.

* A letter by A. M. McLellan, M. D., New York, to *The Journal of the American Medical Association*, and published on February 4, 1933, in which the toxicity of nupercain is discussed, is here appended.

To the Editor:—In *Queries and Minor Notes* (THE JOURNAL, December 3, 1932, p. 1973) occurs a caution regarding the toxicity of nupercain which may lead to misunderstanding.

One should distinguish between absolute and relative toxicity. True, nupercain is, absolutely, fully equal to cocaine in toxicity as judged by subcutaneous injection into dogs. On the other hand, it has been shown to be more powerfully anesthetic, so that its relative toxicity may eventually be found to be less than that of cocaine by injection. Indeed, so far as I am aware, there is no proof that nupercain, in proper anesthetic concentration, is more toxic than procain in similar anesthetic strength. Unfortunately, through carelessness or ignorance, nupercain has been used in some instances in far greater concentration than is necessary or advised, and the disastrous results have been ascribed unjustly to the drug and not to its user.

My associates and I have been using nupercain now over three years for surface, infiltration, caudal and subarachnoid anesthesia. In the urethra we employ 1:250 solution, injecting a total of about 20 cubic centimeters in the anterior and posterior urethra. This procedure has been followed in approximately one thousand patients and we have yet to observe an instance of toxic reaction. There is no doubt in my mind that the injection of 1:250 solution of nupercain into the urethra may cause poisoning if it is done with carelessness; likewise, there is no doubt in my mind that the intra-urethral injection of 4 per cent procain hydrochlorid may cause serious or even fatal reaction if it is done soon after instrumentation, or if undue force is used in making the injection.

In my opinion, there is no "fool-proof" local anesthetic that is truly effective, and one cannot too strongly condemn exaggerated claims regarding the safety of these drugs. On the other hand, from personal experience and a fair knowledge of the literature, I do not believe that the risk attending the intelligent use of nupercain for any type of anesthesia is greater than that attending the employment of the "safe" procain hydrochlorid.—A. M. McLellan.

I still feel when operating upon patients, where the past history is not clear and the anesthetist is not expert, ether by the drop method is the safest anesthetic.

✽

W. W. Cross, M. D. (1624 Franklin Street, Oakland).—To one who has observed spinal anesthesia since it was introduced in surgical procedures, the progress that has been made is as impressive as the procedures when first introduced. Calling to mind experience with cocain, stovain, tropacocain, and novocain, which are apparently toxic, in the order named and have been discarded in this order save the last, which would have, had it not been for the introduction of ephedrin.

Should the contention set forth by Doctor Holder be the experience of others who are influenced by his suggestions, it would mean further improvement in this valuable method of inducing anesthesia.

During the past eight years, in association with Dr. L. L. Stanley in the state prison at San Quentin, an opportunity has been afforded to observe the records of four thousand spinal anesthetics. This has embraced the use of several different drugs, but many years ago novocain was found satisfactory. There have been many efforts to induce a change, but we adhere to the novocain crystals dissolved in two centimeters of spinal fluid. Since ephedrin was added to the procedure the results have been better. This is usually given by mouth, three-fourths of a grain one-half hour before the patient goes to the operating room.

While there have been many suggestions as to the contraindications in certain conditions, our experience has not made such facts sufficiently marked to observe them.

My own work is confined to urologic surgery, and many are men, old and feeble, with cardiac and vascular disease practically a certainty, but there has not been a death. The only death we felt we could charge to the anesthesia was in a young man who had peptic ulcer with perforation and hemorrhage. A spinal was administered to facilitate the effort to deal with the hemorrhage. He was exsanguinated when he reached the hospital.

In high operations the second space is used, and for a nephrectomy the patient remains on the side to be operated upon for five minutes. One observes the effect is confined largely to that side until the patient is turned to the other side.

The usual dose ranges from 50 to 150 milligrams. The anesthesia lasts usually for one hour. In my private work, gas and oxygen are frequently added for the comfort in relieving the nervous tension of the patient, but previous medication is seldom given.

Certainly in urological procedures that are carried out upon old men with poor kidney function and cardiac and vascular disease, spinal anesthesia has added much to enable such patients to be brought through a serious surgical procedure successfully.

Although not having had experience with nupercain alone or a combination with novocain, one cannot be otherwise than impressed that it has merit, as the experience of Doctor Holder indicates and for the reasons he has set forth.

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DOCTOR HOLDER (Closing).—I wish to thank Doctors Butler and Cross for their discussion. Finally, I would mention recent experience with this combination in connection with pantocain. Experiencing very definite delay with the onset of complete anesthesia when using pantocain, I have satisfactorily employed a similar technique with this agent. Length of anesthesia is approximately one-half that of nupercain, but with less reaction. My experience has been prompt anesthesia as with novocain alone, when using the above mixture; with much lengthening of anesthesia with both these substances when lengthened anesthesia is desired.

DIVERTICULOSIS AND DIVERTICULITIS OF THE COLON*

By VERNE C. HUNT, M. D.
Los Angeles

DISCUSSION by Clarence G. Toland, M. D., Los Angeles;
Fred R. Fairchild, M. D., Woodland; Leo Eloesser, M. D.,
San Francisco.

DIVERTICULA occurring in the colon were perhaps first described by Cruveilhier¹ in 1849. They were subsequently described by Virchow,² in 1853, who gave a minute description of peridiverticulitis, to which he referred as a "chronic adhesive peritonitis." Rokitsky,³ in 1856, contributed materially to the knowledge of the subject. In 1858, Sydney Jones⁴ reported a case of acute diverticulitis of the sigmoid which resulted in a fistulous communication with the bladder. In 1898, Graser⁵ again called attention to this distinct disease entity, emphasizing its importance in the explanation of certain symptomatic manifestations of the sigmoid colon. For the most part, up to this time, the contributions to the knowledge of diverticula of the large bowel had been made on observations at the autopsy table. In 1904, Edwin Beer⁶ presented a most comprehensive consideration of the etiology and pathology of diverticula of the colon. In 1907, Wilson, Giffin, and W. J. Mayo⁷ reported five cases in which a portion of the sigmoid was resected for diverticulitis; these cases were the first recorded in which an operation had been performed. The description of the clinical manifestations of the disease and its pathology brought forth a rapid succession of contributions by Hartwell and Cecil,⁸ Telling,⁹ Mummery,¹⁰ Watson,¹¹ Judd and Pollock,¹² Erdmann,¹³ Spriggs and Marxer,¹⁴ Rankin and Brown,¹⁵ David,¹⁶ Conway and Hitzrot,¹⁷ and many others.

FREQUENCY OF DIVERTICULA AND DIVERTICULITIS

Sacculation, or the formation of a diverticulum, may and does occur in any hollow viscus, channel or duct. Diverticula occur in the urinary bladder, urethra, gall-bladder, common duct, and the entire gastro-intestinal tract from the upper esophagus to the rectum. The condition of diverticulosis, however, is recognized as a more or less distinct entity confined to the colon, while diverticulitis practically always infers an inflammatory process in diverticula of the sigmoid colon.

Diverticulitis has become a frequent finding with the increase in roentgenologic examinations of the colon following the barium enema. During a six-year period at the Mayo Clinic, diverticula were present in 5.7 of the x-ray examinations of the colon. Robertson observed diverticula of the colon in five per cent of autopsies in persons more than forty years of age. Much controversy has arisen regarding etiologic factors responsible for diverticulosis, and there seems to be little unanimity of opinion. It is certain that a number of

conditions are contributory factors. Diverticula of the colon are seldom if ever true diverticula in that all coats of the wall of the bowel enter into the formation of the sacculization, but in practically all instances are false diverticula resulting from herniation of mucosa through defects in the muscle wall covered by the peritoneum. It seems that among all of the causes attributed to the development of false diverticula of the colon, Keith's¹⁸ idea of intracolonic pressure is most plausible and acceptable. That there are defects in the large intestinal wall, there seems good reason to believe. The penetration of the muscularis by the blood vessels should provide points of muscular weakness vulnerable to intracolonic pressure. Diverticula of the colon practically always occur opposite the mesenteric border and in the lateral walls of the colon. Conway and Hitzrot¹⁷ described the diverticula as pea-shaped projections from the bowel wall, which at times are contained within appendices epiploicae, and may be grossly indistinguishable from such normal structures. The literature contains scant reference to possible relationship between appendices epiploicae and diverticulosis. As observed in the x-ray films and at autopsy, diverticulosis may involve the entire colon from the cecum to the rectum, but its frequency and size increase from the right to the left colon. Some years ago, in the preparation of a thesis, "Torsion of Appendices Epiploicae,"¹⁹ I had occasion to study the nature and distribution of these structures. Their size is variable in different persons along the course of the large bowel, the smallest occurring along each side of the appendix vermiformis. The development is moderate on the ascending and descending colon, and the greatest size is usually on the transverse colon and sigmoid flexure. Their length varies from 0.5 to 5 centimeters, and as a rule one artery and one vein enter each appendix epiploicae. It is in the obese person that maximum development of appendices epiploicae is noted. With maximum development of these structures, larger nutritional blood vessels pierce the muscularis, providing to small, poorly developed appendices epiploicae a larger muscular defect than that for the vessels. Since all cases of torsion of an appendix epiploicae present acute pathologic processes, characterized by subperitoneal hemorrhagic effusion, fat necrosis and gangrene, infection of the appendix epiploicae by direct microbic invasion from the lumen of the bowel, as in diverticulitis, seems a very probable etiologic factor. That some relationship exists between appendices epiploicae and the development of diverticula of the colon is seen in the observation that extensive diverticulosis exhibits a distribution of diverticula similar to the anatomic arrangement of appendices epiploicae.

In diverticulosis of the colon there may be but a solitary diverticulum in any portion of the colon, or a great many diverticula distributed from the cecum to the rectum. When multiple, they are found in increasing size and number from the right to the left side of the colon, and are usually more numerous in the sigmoid, to which portion of the colon they are confined in 75 per cent of

* Read before the joint meeting of the Radiology and General Surgery Sections of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

the cases. Diverticulosis has been observed usually after the fourth decade of life. Hartwell and Cecil⁸ reported two patients seven and ten years of age; one of Erdmann's cases was under seven years of age. Seventy per cent of the patients observed at the Mayo Clinic, and reviewed by Rankin, were between fifty and seventy years of age; 95 per cent were more than forty years of age. It is noteworthy that persons in whom diverticulosis of the colon is present tend toward obesity. Constipation has been considered an important factor in diverticulosis; however, it is very questionable that such functional disturbance may be considered etiological. More probable is constipation coincident or resultant from increased spasticity of the colon often associated with diverticulosis.

Diverticulosis usually exists as an asymptomatic condition. It is only with the advent of retention of fecal material, with secondary inflammatory reaction in and about the diverticulum, that symptoms may be manifested and the condition recognized as a true diverticulitis. While diverticula may be present in any portion of the colon, it is extremely uncommon to encounter diverticulitis in other situations than the sigmoid colon. It seems reasonable to explain the absence of such inflammatory process in the right half of the colon not only on the relative infrequency of diverticula in that portion of the colon, but on the relative fluidity of the contents of the right half of the colon as compared with the more solid nature of the contents of the sigmoid, with impaction of fecal material within diverticula proceeding to the formation of fecal concretion. The condition of diverticulitis for the most part is peculiar to the sigmoid, and often has been called left-sided appendicitis of old people.

The inflammatory process that sometimes appears in one or more diverticula may be an entirely local one in which resolution occurs promptly, or it may be progressive with perforation, localization with abscess formation, or general peritoneal involvement. Protective perforation onto the bladder or small intestine at times results in fistulous communication with such structures, as a vesicocolic or enterocolic fistula.

RELATIONSHIP TO CARCINOMA OF THE COLON

Considerable difference of opinion exists regarding the relationship of diverticulosis or diverticulitis to carcinoma of the colon. In general it may be stated that malignant disease occurring in a diverticulum in any situation in the body is extremely rare, but it does occur. I have previously reported^{20, 21} five cases of malignant disease occurring primarily in, and confined to, a diverticulum of the urinary bladder. There was nothing particularly peculiar about these diverticula, for the malignant lesions within were the same type of epithelioma usually encountered in the urinary bladder. Malignant disease occurs more frequently in the sigmoid than in any part of the gastro-intestinal tract except the stomach. In approximately 45 per cent of the cases of malignant disease of the colon, to the exclusion

of the rectum, the lesion occurs in the sigmoid. Occasionally diverticulitis and carcinoma are associated; however, there is very little evidence that carcinoma develops but rarely, if ever, upon a chronic diverticulitis of the sigmoid. When they are associated, diverticula of the sigmoid may become invaded by carcinoma, as primary malignant disease of the urinary bladder may invade an associated diverticulum.

RANKIN'S CLASSIFICATION

The classification of Rankin²² provides an excellent division in terms of pathology, clinical manifestations and indications for therapy. (1) Diverticulosis: Cases in which evidence of diverticula is found by roentgenographic examination or at autopsy, and in which, from all available data, the diverticula do not bear any relationship to the patient's complaint. (2) Diverticulitis: Acute, chronic, complicated, with formation of abscess and fistulas, external and internal (vesicocolic and enterocolic), and cases associated with malignancy.

That diverticulosis may be found on roentgenologic examination of the colon in the absence of symptoms is of no greater significance than the visualization of the appendix following a barium meal or enema, and the potentialities are perhaps no greater than in a visualized appendix. When symptoms are manifested in the presence of diverticulosis it is reasonable to suspect a diverticulitis involving one or more of the sacculations. Inasmuch as diverticulitis is practically always a disease of the sigmoid, symptomatic manifestations of such disease usually emanate from the lower left quadrant of the abdomen.

In chronic, or often styled self-limited diverticulitis, the inflammatory process is limited to the wall of one or more of the diverticula, manifested clinically by recurrent attacks of left lower abdominal discomfort or moderate pain, constipation or diarrhea lasting a few days, with disappearance of symptoms. Acute diverticulitis is often accompanied by left abdominal symptoms closely resembling those of acute appendicitis, characterized frequently by acute onset of pain, nausea and vomiting, fever, leukocytosis, and localized tenderness. There is often a disturbance of normal bowel activity. Such attacks may subside after appropriate therapeutic procedures, to recur repeatedly at intervals of weeks or months. Perforation may occur, as in acute appendicitis with abscess formation or general peritonitis. A protective perforation may result in symptoms referable to the bladder. This structure is the one most frequently involved when diverticulitis becomes complicated by fistula formation. Erdmann has on a number of occasions met with perforation of diverticula high in the rectum, resulting in ischiorectal abscess. The advent of a vesicocolic fistula is characterized by the manifestations of a cystitis, and usually the passage of fecal material or gas, or both, establishes the diagnosis. When multiple diverticula become involved in an acute diverticulitis, the inflammatory reaction and peridiverticulitis often appear sufficiently pronounced that a tumor mass becomes palpable, which at times produces partial obstruction in the sigmoid.

It is extremely unusual for such a process associated with diverticulitis to exhibit the complete obstruction so often produced by malignant disease in this situation.

Roentgenologic examination of the colon after giving a barium enema is the most dependable single procedure in the diagnosis of diverticulosis, and when diverticulitis is suspected the presence of one or more diverticula in the film aids materially in establishing the diagnosis.

REPORT OF CASE

One may be misled in placing complete reliance upon roentgenologic aid, for roentgenologic evidence may be entirely lacking. Such an instance was brought to my attention about two years ago. A physician had had repeated attacks during the preceding three or four years, all of a similar nature, and characterized by more or less acute onset of pain in the left lower quadrant of the abdomen, accompanied by nausea and vomiting, increased intestinal peristalsis, diarrhea, localized tenderness, fever and moderate leukocytosis. Repeated complete examination, including roentgen investigation of the urinary and intestinal tracts, had failed to disclose the cause of the attacks. A recent roentgenologic examination of the colon showed moderate irregularity in the sigmoid, which persisted in only one of several films, and was regarded due to spasm of the sigmoid. At no time were diverticula depicted in the films. Within twenty-four hours following the last attack, I explored the abdomen through a left rectus incision and found a single diverticulum low in the sigmoid, opposite the mesenteric border. The diverticulum was about one centimeter in diameter, and contained an abscess. Appendices epiploicae were adherent to the diverticulum as protection to the perforation which had occurred. That no subsequent attacks have occurred and that no other diverticula were found at exploration, when taken in conjunction with the absence of diverticula in repeated films of the colon, is more than suggestive that in this particular instance there was but one diverticulum.

DIAGNOSIS

Diverticula are usually multiple, but at times are single, and with their involvement in inflammatory disease it is to be expected that the usual roentgen evidence of diverticulosis would be entirely lacking. A mass in the lower left quadrant of the abdomen at times presents roentgenologic findings in which it may be extremely difficult to differentiate between diverticulitis with extensive peridiverticulitis and carcinoma. Usually, under such circumstances, one must always give due consideration to the association of diverticulosis and carcinoma, or perforation of the sigmoid at the site of carcinoma with localization of infection or abscess formation. The mass, localized tenderness, abdominal distention, fever and leukocytosis may be present with tumefaction due to diverticulitis, as with carcinoma which has perforated. One must then give due consideration to diagnostic features of secondary importance, *i. e.*, the previous history of bleeding from the bowel, the character and size of the stool, and the findings on proctoscopic examination. In the presence of such an acute process, proctoscopic examination is practically always contraindicated, and at best provides little, if any, accurate or dependable data supporting a diagnosis of diverticulitis.

When enterovesical fistula exists as a complication, the passage of fecal material and gas from

the bladder usually establishes the diagnosis. The frequent passage of thin stools of the nature and consistency of small intestinal contents in the absence of blood and mucus, at some time subsequent to an acute diverticulitis, aids to establish the diagnosis of enterocolic fistula. The onset of an acute diverticulitis, simulating an acute attack of appendicitis, should be suspected in all such acute symptoms emanating from the lower left quadrant of the abdomen, particularly in the male beyond forty years of age, after excluding left ureteral stone. In the female the diagnostic difficulties are enhanced through possible primary disease of the pelvic organs. Erdmann has stated that in the acute fulminating type of diverticulitis it may be that one must take refuge in the diagnosis of an acute condition of the abdomen and explore.

TREATMENT

The treatment of diverticulosis is of about as little importance as are the findings of these little sacculations in the colon when they are asymptomatic. The presence of diverticuli in the colon in the absence of symptoms is of no more significance than the visualized appendix vermiformis without symptoms. Inasmuch as constipation often is associated with moderate or extensive diverticulosis of the sigmoid, and perhaps is a factor in the production of a diverticulitis, anticonstipation regimen, including a bland diet and the use of the mild oils, is advisable. Should mild symptoms of diverticulitis occur, continued regulation of the bowels, with external application of heat and the use of belladonna to relax bowel spasm, usually suffices. Surgical treatment must always be given due consideration when symptoms of acute diverticulitis are present. However, as to whether operation should or should not be advised requires mature judgment. The treatment of diverticulitis of the sigmoid depends upon many factors. W. J. Mayo²³ has said: "In acute cases if the patient is old, obese, and a poor risk for operative procedures, the treatment should be tentative." Erdmann²⁴ has taken the rather extreme position by the statement, "The acute condition presents but one solution, in the absence of contraindications, and that is, early operation." He states further, "One should no more wait for resolution in the acute type of the disease than to wait with an acute appendicitis or suppurating tubes." It is my opinion that such recommendation may well apply to the cases only in which one may suspect an acute perforated diverticulitis. Experience has shown that perforation with general peritoneal contamination occurs rarely; that when perforation does occur it usually is a protective one wherein omentum and appendices epiploicae tend to localize the process to the wall of the bowel in which resolution frequently occurs. If the process goes on to abscess formation, drainage, of course, becomes necessary.

Surgical Indications.—Indication for surgical procedure is very definite in the chronic complicated cases where, following the drainage of an abscess, an external fecal fistula persists, with failure of resolution of the inflammatory process

in the sigmoid, and in those cases in which enterovesicle or enterocolic fistula occur; those in which an inflammatory obstruction of the sigmoid results, and those associated with carcinoma. Such complications usually require radical procedures. It should be borne in mind that radical surgical procedures on the left colon carry greater risk than similarly radical operations elsewhere in the entire gastro-intestinal tract. Resection of the sigmoid for a partially obstructive inflammatory process may at times be accomplished with a fair degree of safety by the multiple stage Mikulicz procedure. However, it is often if not usually best to precede such procedure by temporary colostomy or cecostomy. The value of preliminary drainage of the colon by colostomy or cecostomy cannot be too strongly emphasized. The Mikulicz procedure may be regarded as the only occasional exception to preliminary drainage, and I should urge that when the Mikulicz type of operation is performed, the loop of the sigmoid containing the inflammatory process be so managed as to not increase the degree of intestinal obstruction that may be present, or increase the degree of obstruction postoperatively. To be specific, the obstructive type of resection for diverticulitis, used at times for carcinoma of the sigmoid, is entirely contraindicated unless a previously made and functioning colostomy or cecostomy exists. Postoperative distention of the colon following any operation for diverticulitis in the presence of other diverticula proximal to the obstruction increases materially the danger of acute perforation of one or more of these diverticula. An experience in point occurred a little more than a year ago in a patient in whom the diverticulitis had produced a large inflammatory mass which failed to resolve. At operation the entire inflammatory loop of sigmoid was brought outside of the abdomen and, instead of leaving the loop as a true Mikulicz procedure, an obstructive resection was done immediately and the inflammatory mass of the sigmoid was removed. I had not made a preliminary colostomy or cecostomy, nor did I consider it advisable at the time of the resection. Convalescence was entirely satisfactory for the first thirty-six hours, at which time an acute abdominal complication developed and death occurred the following day. Autopsy disclosed perforation of two diverticula in the descending colon well above the site of resection. It is, furthermore, of interest that preliminary drainage of the colon by colostomy or cecostomy will at times be followed by complete resolution of the inflammatory mass in the sigmoid resulting from extensive diverticulitis, obviating the necessity for a subsequent radical procedure.

Internal fistulous communication with the bladder or other portions of the intestinal tract are practically always best dealt with after preliminary colostomy or cecostomy. The methods by which enterovesicle and enterocolic fistulas may be repaired are much more easily described than executed and accomplished. Suffice it to say that extensive resections at times must of necessity be resorted to.

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DISCUSSION

CLARENCE G. TOLAND, M. D. (1930 Wilshire Boulevard, Los Angeles).—Diverticula of the colon were once regarded as inoffensive curiosities, and not until comparatively recent years have they been recognized as the cause of many of the inflammatory lesions involving the large bowel.

Their origin is generally considered to be acquired, and in this connection it is interesting to note that in the small intestine diverticula occur at the mesenteric attachment, while in the colon they occur opposite the mesenteric border.

A noted surgeon once told me that during the course of a laparotomy, which necessitated manipulation of a colon, the site of diverticulosis, he actually observed a small diverticulum in the process of formation; much as a bubble, slowly appearing through a muscle defect on the surface of the sigmoid. The story,

fact or fancy, accomplished its purpose of creating a lasting impression regarding the cause of diverticula.

To call diverticulitis of the colon left-sided appendicitis, is a loose application of the term and creates, to a certain extent, a false impression. Diverticulitis, acute or chronic, is a much more complex pathologic process, having a different symptomatology and requiring different surgical treatment. We would be fortunate if diverticulitis could be managed as simply as appendicitis.

If the inflammation would be considerate enough to confine itself to one diverticulum, the situation could readily be corrected; but almost certainly a number of diverticula will be involved, and most likely they will be in varying stages of inflammation.

A diffuse peritonitis is frequently present in the acute stages, so surgical intervention is usually not safe until localization and abscess formation have occurred. Then, too, after incision these abscesses have a disconcerting tendency to form a stubborn fecal fistula or, even worse, multiple fistulae. Not infrequently, when all seems apparently well, perhaps after some months, the abscess recurs and another incision becomes necessary.

Many remedies have been advocated and employed in an attempt to eradicate these residual fecal fistulae. Intensive heliotherapy has definite value, and if the fistula be small the deep instillation of irradiated oil (Radolatum) seems beneficial. Repeated application of the electric cautery to the mouth of the fistula often produces obliteration and closure. A radical excision of the tract or infected area is attended with considerable hazard and should only be attempted in certain selected cases, such as those unfortunates whose lives have become burdened with the discomfort of the purulent and fecal discharges.

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FRED R. FAIRCHILD, M. D. (Woodland Clinic, Woodland).—Doctor Hunt's discussion of this interesting subject will be heartily approved by experienced surgeons, primarily because of his conservative attitude. Cautious approach is the only safe method of attacking this often very serious condition.

The speaker states, "Diverticulosis usually exists as an asymptomatic condition." This statement should be remembered, particularly in summing up the data in diagnosis of obscure abdominal conditions. The roentgenologist can often positively report a diverticulosis of some portion of the large bowel. Without convincing supporting clinical data we should be slow in accepting this finding as an answer to our diagnostic problem. Remember that diverticulosis is usually asymptomatic.

The speaker disagrees with those surgeons who insist on active surgical attack in all cases of acute diverticulitis. Those of us who have observed the extreme hazard of this procedure must agree.

In discussing resections of the sigmoid for partially obstructive inflammatory processes, he states: "It is often, if not usually best, to precede such procedure by temporary colostomy or cecostomy." One wonders if it is not always best, and if, in the light of our further experience, we will not ultimately make this first step as much a routine procedure as we now do that of bladder drainage in anticipating a prostatectomy. Experiences in surgery of the large bowel for other conditions than the one under discussion must have convinced us of the value of preliminary drainage. If this experience is to guide us we should not permit ourselves, because the technical problem looks simple, to proceed without this added safeguard.

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LEO ELOESSER, M. D. (490 Post Street, San Francisco).—Doctor Hunt's paper, based upon an uncommonly wide experience with the material of the Mayo Clinic, compels interest and attention.

Although, as he says, it is more common to find diverticula in the obese, it is not rare to see them in thin persons. Doctor Hunt has presented the picture of subacute and acute diverticulitis with peridiverticulitis and perforation. He mentions, also, symptoms of so-called spastic colitis occurring in patients with

diverticula. The two accompany each other so frequently that one is inclined to assume some connection between the diverticula and the spastic colitis. Often patients who complain of alternating constipation and diarrhea, of the passage of mucus in the stools or, less frequently, of mucus alone; who have attacks of abdominal distention accompanied by some generalized colicky pain, sometimes approaching the degree seen in a low ileus, and who, during these attacks of distention, are nauseated and vomit, are found to have diverticula. When their bowels are regular and the stools mushy, they are fairly comfortable. Attacks of constipation or diarrhea, or of either one followed by the other, usher in episodes during which nausea and distention may be so severe that they might easily be mistaken for signs of intestinal obstruction. The stools may be narrow and ribbonny, or they may be hard and contain at times small, hard, round pellets. Again, they may be loose and contain large amounts of mucus; the pain, distention, and nausea being greater when the bowels are loose than when they are constipated.

Many of these attacks go on without elevation of temperature or of the white count; they are probably spastic rather than truly inflammatory. In others a low fever and some degree of leukocytosis would make one diagnose a diverticulitis or pericolicitis. But the attacks usually yield to rest, hot compresses, liquid diet, and belladonna.

Several patients have presented the classical picture of ureteral colics; they have had severe paroxysms of pain in the flank, radiating to the bladder region and the genitals, and have passed considerable quantities of blood in the urine, the blood being easily visible to the naked eye. Careful examination of the urinary tract has excluded stones, and no cause, save the presence of multiple diverticula, was found for the colic. One was forced to assume that a diverticulitis or peridiverticulitis encroached on the wall of the ureter, and that the pain and bleeding were a part of this secondary ureteritis.

SPINAL FLUID FINDINGS IN SYPHILIS*

By NORMAN N. EPSTEIN, M. D.
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AND

LEROY K. GAY, M. D.
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Discussion by Stanley O. Chambers, M. D., Los Angeles;
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EXAMINATION of the spinal fluid in patients with syphilis, both as a diagnostic aid and as a guide in the management of the therapy of an individual case, is universally recognized as an essential procedure. This test, however, is not made as often or repeated as frequently as it should be because of technical difficulties or because of the patient's fear of a spinal puncture. During the past few years, experience has demonstrated that the spinal fluid must be repeatedly studied before one can be assured that a lesion of the central nervous system does not exist or that it has been controlled by treatment.

Abnormalities in the spinal fluid are often found in the first few months of the disease. It is at the time of the generalization of the infection with the *Treponema pallidum* during the early stage of the disease that changes, such as

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an increase in the cell count, increased proteins and globulins, changes in the colloidal gold curve and a positive Wassermann reaction appear. Most observers report that from 30 to 50 per cent of these cases have definite spinal fluid changes indicating the presence of lesions in the central nervous system. Invasion of the nervous system may also occur during some subsequent dissemination of the *Treponema pallidum*. It is unusual, however, for an adequately treated patient with early syphilis and a negative spinal fluid to develop neurosyphilis at a later time; but this is occasionally observed. During the later stages of the disease, Moore² states that the general incidence of neurosyphilis probably does not exceed 20 per cent.

Much of our present knowledge of the changes which may occur in the spinal fluid in syphilis is based on the investigations by Fordyce and Rosen,¹ Moore,² Wile and Keim,³ Stokes and Busman,⁴ O'Leary and Nelson,⁵ Solomon and Klauder.⁶

The purpose of this paper is to emphasize the importance of examination of the spinal fluid in patients with syphilis. Particular emphasis is placed upon the relation of the blood to the spinal fluid findings. It has been our practice to examine the spinal fluid of all patients showing any clinical evidence of central nervous system syphilis; all patients who have received adequate therapy; all those with persistently positive blood Wassermann or Kahn tests; and those patients who come to the clinic with a history of previous treatment. Because of the large number of patients who are itinerant and do not complete their prescribed course of treatment, no accurate deduction as to the incidence of neurosyphilis in this clinic can be made from our statistics.

CLINICAL MATERIAL

The group studied consisted of 335 patients in the various stages of syphilis, of whom 75 were females and 260 males. All were white except four, who were colored. The large majority were between thirty and fifty years of age. A total number of 906 blood Wassermann tests by the Kolmer method and 478 spinal fluid examinations were done on this series of cases. Usually the Kahn test was performed on the blood as was also the Wassermann, but the Kahn test was not done on the spinal fluid.

CLASSIFICATION ACCORDING TO DIAGNOSIS AT ENTRY

The patients are classified in Table 1 according to the diagnoses which were made upon entry to the clinic, and which were based upon clinical and

TABLE 1.—Diagnostic Classification of Patients	
Diagnosis	Number of Cases
Early:	
Primary	5
Secondary	12
Late:	
Asymptomatic central nervous system syphilis	38
Paresis	43
Tabes dorsalis	75
Taboparesis	42
Meningovascular syphilis	5
Latent syphilis	115
Total	335

TABLE 2.—Diagnostic Classification: With Subgroupings According to Sex, Age, Infection Periods and Spinal Fluid Findings

	Sex		Age Groups (in years)								Duration of Infection (in years)								Serology				Total Number Cases
	M.	F.	10-20	20-30	30-40	40-50	50-60	60-70	1-5	5-10	10-20	20-30	30-40	Unknown	P. B. P. S.*	P. B. N. S.	N. B. P. S.	N. B. N. S.					
Early syphilis { Primary	4	1	1	2	1	1	0	0						10-12 days	0	2	1	2	5 12				
Secondary	8	4	0	3	6	1	2	0						2-7 mos.	5	3	1	3					
Late syphilis { Asymptomatic C. N. S. {	29	9	0	5	14	13	4	2	5	3	7	1	1	20	33	1	1	3	38 43 75 42 5				
	39	4	0	4	23	7	5	4	6	2	12	1	1	21	40	0	3	0					
	60	15	0	7	19	29	12	8	3	3	19	13	3	34	51	2	18	4					
	Taboparesis	33	9	0	1	13	17	10	1	2	3	4	5	1	21	39	0	3		0			
	Meningovascular	3	2	0	4	1	0	0	0	1	1	1	1	0	1	3	0	2		0			
Latent syphilis	86	29	0	27	28	35	11	4	23	7	16	13	5	51	18	53	14	14	115				
																			335				

* In all tables—P. B.=Positive Blood; N. B.=Negative Spinal Fluid; P. S.=Positive Spinal Fluid; N. S.=Negative Spinal Fluid.

TABLE 3.—*Wassermann-Fast Group*

No. Years Known Positive Blood	No. Cases	No. Years Treatment	No. Cases	P. B. P. S.*	P. B. N. S.
1 year	8	1 year	7	27	20
2 years	12	2 years	12	....	....
3 years	10	3 years	15	....	....
4 years	7	4 years	3	....	....
5 years	5	5 years	5	....	....
6 years	3	6 years	1	....	....
7 years	1	7 years	1	....	....
8 years or over	3	8 years or over	4	....	....

* P. B.=Positive blood.
P. S.=Positive spinal fluid.
N. S.=Negative spinal fluid.

serologic findings. In the group termed "asymptomatic central nervous system syphilis" are included all cases without clinical symptoms, and a few cases which did not correspond to the other types of neurosyphilis. Those patients listed as having "latent syphilis" showed no symptoms or signs of the disease on entry except positive serologic tests in the blood, nor gave a definite history of the infection with inadequate therapy.

The patients are further analyzed in Table 2 under their respective diagnoses, showing the groups, sex, and age arranged by duration of infection and the relation of the blood serology to the spinal fluid findings.

ASYMPTOMATIC CENTRAL NERVOUS SYSTEM SYPHILIS

There were thirty-eight patients with a diagnosis on entry of asymptomatic central nervous system syphilis, although in the group classified as latent upon entry there were thirty-two additional cases with positive findings in the spinal fluid, but for convenience they will be discussed separately. Several other cases are included in this group which did not fit into other types of neurosyphilis. From the table it can be seen that the large majority of these patients, thirty-three, or 89.5 per cent showed positive blood, as well as positive spinal fluid serology, while three had a negative blood Wassermann and Kahn, and a negative spinal fluid in spite of clinical evidence of central nervous system syphilis. Two others showed discrepancies between the blood and spinal fluid findings. The greater number were in the age group, thirty to fifty years.

PARESIS

Forty-three cases with paresis were studied. All had positive spinal fluid findings, while only three had negative serologic findings in the blood. The majority of patients were between thirty and fifty years of age, and had had their infection for from ten to twenty years.

TABES DORSALIS

Seventy-five cases of tabes dorsalis are listed. Fifty-one patients had positive blood and spinal fluids, while eighteen had negative blood reactions and positive spinal fluids. Six had negative spinal fluid findings, of whom two had positive blood Wassermann and Kahn tests. In this group were found the largest number of discrepancies between blood and spinal fluid findings. Twenty-six such instances were noted, or 34.5 per cent of the total number of cases. These findings emphasize the fact that a negative blood Wassermann or Kahn test is not uncommon in tabes dorsalis, and that it is not unusual to find the serological tests negative on both the blood and spinal fluid.

TABOPARESIS

Forty-two cases of taboparesis all showed positive spinal fluid findings. Three of these had a negative blood Wassermann and Kahn. There were few discrepancies in the serological findings of this group.

LATENT (ENTRY DIAGNOSIS)

Of 115 cases classified as being in the latent phase of syphilis with no signs of involvement of the central nervous system, 32, or 28 per cent had

TABLE 4.—*Relapsing Blood Serology*

Years of Observation	No. Cases	Years of Treatment	No. Cases	P. B. P. S.*	P. B. N. S.	N. B. P. S.	N. B.
1 year	4	1 year	7	21	9	2	2
2 years	1	2 years	5	....	..	..	N. S.
3 years	4	3 years	4	....	..	..	..
4 years	5	4 years	3	....	..	..	..
5 years	5	5 years	3	....	..	..	..
6 years	2	6 years	2	....	..	..	..
7 years	3	7 years	1	....	..	..	..
8 years or over	10	8 years or over	5	....	..	..	..
		Unknown	4				
		Total	34				

* P. B.=Positive blood.
N. B.=Negative blood.

P. S.=Positive spinal fluid.
N. S.=Negative spinal fluid.

positive spinal fluid serology, of whom 18 had positive blood and 14 had negative blood findings. Fifty-three others had positive blood, negative spinal fluid combinations, and 30 had entirely negative blood and spinal fluids.

The other groups are not discussed as they included but a few cases.

Considering the series as a whole, each group showed the same preponderance of males over females. A large number of patients, 148, or 44 per cent, had no knowledge of the onset of their infection. Most of those with a definite history of onset had had the disease for from five to twenty years.

It is of interest to note that in four cases classified under the heading asymptomatic central nervous system syphilis, and in six cases of tabes dorsalis, the spinal fluid serology was entirely negative. It was pointed out by Solomon and Klauder,⁶ and by O'Leary and Nelson⁵ that it was not unusual to have a normal spinal fluid in the presence of active neurosyphilis. They noted that this is most apt to occur in the vascular types of neurosyphilis, tabes dorsalis, cerebral gumma, cranial nerve palsy, spastic paraplegia, syphilitic epilepsy, and syphilitic psychosis.

WASSERMANN-FAST GROUP

Forty-seven patients, whose blood reactions remained positive after one year of antisyphilitic treatment, were classified as Wassermann-fast, irrespective of entry diagnosis. In Table 3 these cases are listed, showing the length of time the positive blood serology was known to be present, the duration of treatment, and the corresponding spinal fluid findings.

Twenty-seven of these patients, of 57.4 per cent, showed positive spinal fluid serology as well as positive blood serology. Stokes and Busman⁴ found 30 per cent of a series of one hundred cases of Wassermann resistant type had central nervous system involvement.

Report of Case.—The following case will illustrate: A. W., age 21, white, female. Secondary eruption June, 1926. From June, 1926, to February, 1927, received fourteen injections of neoarsphenamin and fourteen injections of mercury salicylate. She did not report again until September, 1928, when a recurrent papular eruption was present on the palms and soles.

During the period of September, 1928, to October 14, 1932, she received twelve injections of sulpharsphenamin, 0.6 each; twenty-three injections of neoarsphenamin, 0.45 each; 104 injections of bismuth; and eighteen injections of mercury succinamid, grain one-sixth each.

Serology:		Blood		Spinal Fluid	
		Wassermann	Kahn		
6-10-26		++++		1-26-33	
9-25-28		++++		Wassermann	++++
10-29-29		++++		Coll. gold	0122210000
9-6-30		+	+++	Globulin	none
5-21-32		—	—	Cells	169 per cu. mm.
1-26-33		—	—		

It may be stated that a patient with a persistently positive blood is likely to have an abnormal spinal fluid.

RELAPSING BLOOD SEROLOGY

Thirty-four patients were selected from the series for special study. These showed a tendency for the serologic tests upon the blood to be of a

relapsing character, that is, positive at one time, negative at another, and then positive at some later time.

Report of Case.—The following case will illustrate: J. H., white, age 38. Entered on January 20, 1930. History of initial sore on lower gum fifteen years before. Received intensive antisyphilitic therapy for three years after diagnosis of primary sore by dark-field examination. Treatment consisted of thirty to forty arsphenamins, and seventy to eighty mercury injections. Blood Wassermann consistently negative since. Physical examination entirely negative.

Blood serology:	
1-31-30	Wassermann (Kolmer) +, +, +, —, —.
	Kahn —, —.
6-24-30	Wassermann (Kolmer) +++++, +++++, +, —, —.
	Kahn +++++.
3-14-31	Wassermann (Kolmer) negative.
	Kahn-negative.
1-8-32	Wassermann (Kolmer) +++++, +++, —, —, —.
	Kahn-negative.
6-7-32	Wasserman (Kolmer) negative.
	Kahn-negative.
Spinal fluid:	
6-10-32	Wassermann, +++++, { Colloidal gold 4422110000.
	+++++, ++, —. { 2 cells. Glob. negative.
3-25-33	Wassermann, +++++, { Colloidal gold 0000000000.
	+++++, +++, —, —. { Glob. negative. Cells 0.
Treatment (January 30, 1930 to January 20, 1933):	
Neoarsph. 24; Bis. 53; Hg. Succ. gr. 1/6 20; malaria.	

The findings in this group are presented in Table 4. Of thirty-four patients in this classification, twenty-three, or 67.6 per cent, had positive spinal fluid serology. This would indicate the great possibility of central nervous system involvement in the patient who shows a tendency toward relapse of the serologic tests of the blood to a positive state after having been negative.

COMMENT

Spinal fluid examination in the patient with syphilis is a most important procedure. The fact that invasion of the central nervous system by the *Treponema pallidum* occurs early in the course of the disease points to the necessity of studying the spinal fluid soon after the patient presents himself for treatment. The blood Wassermann or Kahn does not act as an indicator of the condition of the spinal fluid. A patient with a persistently negative blood Wassermann may be found to have evidence of active neurosyphilis. With the modern advances in therapy, namely, the various forms of pyrotherapy, it is essential to determine early whether an involvement of the central nervous system by the disease is reacting satisfactorily to the usual type of chemotherapy.

The demonstration of a negative spinal fluid in a patient under treatment indicates the probability that a neurosyphilis will not develop. It cannot, however, be regarded with perfect assurance, as occasionally such a patient does develop active syphilis of the central nervous system. In order to protect the patient, the spinal fluid should be examined repeatedly.

It has been pointed out that active syphilis of the central nervous system can be present even though the spinal fluid is entirely negative. This is particularly true in tabes dorsalis, but it occurs in other forms of neurosyphilis. We have seen patients with paresis in whom the spinal fluid became negative after treatment, without preventing progressive mental deterioration.

The high incidence of positive spinal fluid findings in the Wassermann-fast group, and those with a tendency toward serologic relapse, is of particular interest. This suggests that a lumbar puncture should be insisted upon in all of these patients. Inasmuch as there are several component parts to a spinal fluid examination—that is, the Wassermann, colloidal gold curve, protein and globulin determinations, and cell count—the clinician is given more information with which to judge his case. It was interesting to note that thirty-five patients in this series who showed a negative spinal fluid Wassermann test had sufficient changes in the other elements of the spinal fluid to consider them as having active neurosyphilis.

CONCLUSIONS

1. Active neurosyphilis may exist in patients with a negative spinal fluid.
2. Negative blood serology is not uncommon in patients with a positive spinal fluid.
3. In 57.4 per cent of forty-seven Wassermann-fast cases the spinal fluid was positive.
4. In 67.6 per cent of thirty-four patients whose blood relapsed to positive under treatment, a positive spinal fluid was demonstrated.
5. In 27.8 per cent of 115 cases classified as having latent syphilis on entry, positive spinal fluid findings were present.

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DISCUSSION

STANLEY O. CHAMBERS, M. D. (1260 Roosevelt Building, Los Angeles).—The need of adequate spinal fluid examinations in all phases of syphilis is clearly shown in the commendable review by Doctors Epstein, Graves, Sherman, and Gay.

The procedure, unfortunately, is little used to advantage. It has become too much a diagnostic procedure rather than a progress check which, according to modern investigators, offers a most fertile field for prognosticians.

Moore and others have recently shown that the fluids of early infections quite definitely point the way to the future advance of the disease.

Examinations in this phase of syphilis obviously offer therapeutic opportunities otherwise entirely hidden and, unfortunately, neglected.

The spinal fluid guides treatment.

The blood Wassermann alone, as a progress check, is indeed a poor guide-post.

The frequency of negative blood serology, in the presence of positive spinal fluid findings in many

phases of the disease, is enough to prompt the most conservative to demand spinal fluid examinations upon the slightest suspicion.

These facts, properly explained to the patient, frequently make consent for the procedure a simple task.

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C. W. BARNETT, M. D. (Stanford University Hospital, San Francisco).—The importance of examination of the spinal fluid in patients with syphilis can hardly be overemphasized. As is clearly pointed out in the present paper, there is no stage of the disease in which neurosyphilis cannot exist, and the frequent discrepancies between blood and spinal fluid make the blood Wassermann entirely worthless as an index of nervous system involvement.

Examination of the spinal fluid is of particular value in those cases where no evidence of neurosyphilis exists. In a number of cases of central nervous system syphilis noted in this paper, both the blood and cerebrospinal fluid were negative, and yet the diagnosis of nervous involvement was made unhesitatingly on the clinical signs. In nearly 30 per cent of the supposed latent cases, however, positive findings in the cerebrospinal fluid were discovered, demonstrating an involvement of the nervous system which could otherwise never have been suspected. Hopkins has shown that cases with positive spinal fluids are much more prone to the development of clinical central nervous system syphilis than those with negative spinal fluids, and hence the proper treatment of patients with positive spinal fluid serology should greatly improve the prognosis. However, it is probable that not all of these people would develop clinical signs or symptoms if left untreated, and until we have some means of estimating the proportion who do, we will be unable to evaluate accurately the importance of spinal fluid examination in such cases.

The authors have emphasized the importance of repeating examinations of the spinal fluid in order to insure to the patients, freedom from nervous system involvement. Multiple lumbar punctures, however, are often difficult to obtain, particularly in patients who have had the misfortune to experience unpleasant reactions to the first one. I think that it should be pointed out a little more strongly that if the spinal fluid is negative, even on a single examination, in a patient who has had adequate antisyphilitic therapy, there is a strong probability that he will never develop clinical neurosyphilis.

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MONA E. BETTIN, M. D. (727 West Seventh Street, Los Angeles).—This article shows a very comprehensive study of spinal fluids in syphilis. Everyone doing this work knows of the difficulty of obtaining spinal punctures in clinic patients, and of the difficulty of keeping such patients under observation. The tables show the findings very concisely. Spinal fluid examinations, to be of any value, should always include cell counts, globulin estimations, Lange tests, as well as the Wassermann reactions.

We do not agree with the authors that a patient may have active neurosyphilis with an entirely negative spinal fluid. We feel that a diagnosis of *tabes dorsalis* should be made with great care in cases where the blood and spinal fluid Wassermann reactions are persistently negative, even though there be other changes in the spinal fluid. A case came under our observation, a number of years ago, in which a diagnosis of *tabes dorsalis* was made by an eminent clinician in the East. There was an increased cell count, increase in globulin, with change in the Lange, but the Wassermann reaction was persistently negative. At autopsy a neurofibroma of the cauda equina was found. Occasionally, also, one sees cases of pernicious anemia with cord pathology occurring before the blood picture changes.

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DOCTOR EPSTEIN (Closing).—In closing we wish to reemphasize the necessity of examining the spinal fluid of all patients who have had a syphilitic infection. The absence of clinical signs of neurosyphilis or a history of adequate luetic therapy cannot be regarded as absolute evidence that an asymptomatic neurosyphilis does not exist in the patient.

INADEQUATE NASAL RESPIRATION— CORRECTIVE MEASURES*

By GEORGE W. WALKER, M. D.
Fresno

DISCUSSION by Chester H. Bowers, M. D., Los Angeles;
F. C. Kracaw, M. D., Oakland; M. W. Haworth, M. D.,
Sacramento.

WHILE there can be, temporarily, inadequate nasal respiration from acute and subacute infection and its results, this paper will consider more especially hypertrophies, malformations, and remedies.

Along with the complaint that the patient is unable to get a free amount of air through the nose, there is frequent complaint of annoying nasal or postnasal discharges. Sometimes these discharges are made worse because of the presence of hypertrophies, or knuckling of distorted parts, making irritation by their pressure or obstructions to normal avenues of drainage.

I am not here taking up the subject of adenoid tissue in the vault of the pharynx, except to mention it in passing as a cause of aggravation by way of harboring infection which may adversely affect the nasal passages or accessory sinuses of the nose; much of which is bettered by the correction of pharyngeal pathology, such as doing adenoidectomy and tonsillectomy.

Sometimes there is nasal obstruction from new growths in the pharynx which will, of course, have to be removed to make free nasal breathing. Malignancy is sometimes a cause that will have to be properly dealt with when present. Methods of dealing with that I will not take up here.

DEFLECTED NASAL SEPTUM A FREQUENT CAUSE

Probably the most frequent cause of inadequate nasal respiratory capacity is a deflected nasal septum; but often it is not only the septum at fault. The turbinates are nearly always involved, and though you may do a good septum resection, frequently the patients will complain, when proper time has elapsed for improvement after operation that they have not very much greater nasal capacity than before. On the side of the principal convexity of the deflection it is improved, but they have less capacity than they had before on the side of the concavity; this because hypertrophy of lower turbinate, or possibly of both lower and middle turbinate on that side is of such extent as to be in contact with the straightened septum. There will usually be some increased capacity even without turbinate attention, after a submucous resection, because of the fact that the convexity ordinarily is at the vomer-ethmoid and cartilage junction line; that line extending, as it does, from near the floor of the nose in front to much higher at the back, resulting in more or less completely blocking the nostril into which that ridge extends. Frequently there is a secondary ridge crowding into the opposite nostril at the top. The ridge at the top is too often left there in submucous oper-

ations and many times one has to do a second operation to complete what should have been done at the first. That, I think, is the most frequent poor result I see in septum operations. Another bad result which I think occurs too inexcusably often, is perforation of the septum. If it is present, I do not think we need to call attention to it, and criticize the former operator; but in my mind I do criticize him. I have had it result after my own operations; nevertheless, I criticize it, and rarely have it happen now. I think it is sometimes a result of attempting to do an operation in much less time than is necessary for a good submucous resection.

TECHNIQUE OF SUBMUCOUS RESECTION

I think the initial incision in the operation should be made well forward, two or three millimeters in front of the mucocutaneous junction, that is, the vertical part of the line of incision. I like to begin high up, at the top, at a point back of the mucocutaneous junction, coming forward to a point in front of that junction, then down to the floor of the nose, with again an incision from back of that line at the bottom, coming forward to the line of the vertical part of the incision. Where the lines of incision at the top and bottom join the more vertical part of it, I do not make an exactly right-angle turn, but make a curved junction with the vertical. The vertical part then lies in front of the mucocutaneous line, where the septum is thick and the tissues are more tough and enduring than the thin mucous membrane farther back; where there is no question of cutting through into the opposite nostril, and where (even if one were so clumsy as to do that) repair by suture is most simple. With any small full-curved needle, you can suture as rapidly as you could anywhere on the surface of the body. That is not so if the vertical part of the incision lies behind the mucocutaneous junction in mucous membrane. The septum there is thin, and erosive ulcerations in the past often have made it abnormally thin and fragile. The vertical incision may readily go entirely through the septum in such cases, and attempts at repair afterward meet with great difficulty because the mucous membrane tears readily at attempts later to pass the needle or tie the thread.

It is true that many do not care to suture after a septum operation; still, even for that method I would advise that the initial incision be far forward. One reason for this is I do not wish to make the incision through the cartilage opposite or near the point of initial incision, but rather make the initial one far forward, then separate the perichondrium from the cartilage and the periosteum from the bone on the side, and then make the incision through the cartilage far back, thereby retaining a good central support for that part of the nose in front of the bony septum. Too many noses are left with a little sink in lower half of the bridge after the submucous operation. Often there is great deflection at the junction of the cartilage with the vomer below; but I like to leave the cartilage to near its back border, although I have to use a chisel or bone forceps to excise the

* Read before the Eye, Ear, Nose and Throat Section of the California Medical Association at the sixty-second annual session, Del Monte, May 24-27, 1933.

vomer ridge forward. This cartilage which has been separated from the vomer will then readily come over to the center line. If the cartilage above this point is crooked and resists staying in the center line after the bony ridge has been exsected, I do not exsect more than a thin strip two or three millimeters wide at the point of its greatest deflection, merely enough that the cartilage can then be pushed back to the straight line without any redundant portion interfering with its being straightened. This line of excision can be done in any direction through the deflection, the direction that best serves to straighten the form of deflection present; even a little cross excision may be necessary to allow the septal cartilage to straighten and stay straight without resistance. Other lines, too, may need to be cut through the thickness of the cartilage without any exsection, along the top, or the front end of the cartilage, to cause it to readily stand straight. That cartilage remaining has the mucous, submucous tissue and perichondrium attached to it on the opposite side, being only bared on one side; so if it has been straight enough to be allowed to remain a whole cartilage, or if it has been so crooked as to need some lines cut through it, still it is all held to place by its natural support in one nostril, the mucous and submucous tissue and perichondrium. By careful dissection, one can go back past the junction of the cartilage with the ethmoid without tearing through the mucous membrane, in dissecting on the side from which the operation is done; so that if one is unfortunate enough to go through the mucous membrane into the opposite nostril at this point in cutting through cartilage, the mucous and submucous tissues are still whole on the opposite side to cover the perforation. No repair will be necessary when the perforation is only through the mucous membrane of one side and is covered by uninjured tissue on the other. If opposite an extreme summit of deflection on one side we inadvertently make perforation, we can use more detail and care not to go through the opposite side at this point, and there will be no perforation after the process of healing takes place, nor will any suture be necessary at the perforation of only one-half of the mucous and submucous tissue.

COMPLICATIONS

I think that is enough to say about any of the steps of the submucous resection, as they are too well understood by this body to make further comment necessary. I have wished only to call attention to two bad results frequently seen, and to outline methods which can prevent them. Popular methods of operation already followed give good results in all other steps of this operation.

Turbinate Hypertrophies.—As mentioned above, besides the necessary submucous resection in case of deflected septa, there will nearly always be some hypertrophy of turbinate on the side opposite the concavity of the septum, involving the lower, or both lower and middle turbinate bodies. That will call for some limiting of the size of the hypertrophy in many instances before you may get praise from your patient for the results of your operation. Possibly cautery will give greater ca-

capacity in many cases; but if thickening or malformation of the turbinate bone is the cause of the enlargement, I think some excision (the extent to be determined by the necessity) will be necessary. Large cystic parts of middle turbinates will usually have to be removed. If faulty projection of bone proves the offender in the lower turbinate, I often like to do a submucous operation on the turbinate and exsect faulty bone, or break it and put it in the proper position to be rid of the obstruction. Of course, enlarged posterior tips of lower turbinates need to be snared off.

Acute and Chronic Inflammations.—Violent acute rhinitis is often accompanied by obstruction which calls for appropriate medical treatment, and frequently acute sinusitis is present, needing care. Crusty obstructions, as occur in ozena, will tax the rhinologist's ability to the limit. I have gotten good results in numerous instances by doing a Halle operation in these cases where there was a very wide, large nostril, with very little lower turbinate present: I cut the naso-antral wall loose along its whole anterior, upper and lower borders, and, after abrading the surface of the lower turbinate or whatever stump of it may be left, and the septum opposite, I bring it over and suture it to the septum, and put in a little antral pack to hold it against the septum for a short time. This adhesion area will thicken sometimes to nearly a normal thickness of the lower turbinate, and later will tend to pull away from the septum until the adhesions are not over so big an area as it was at first. After a few months, if it be still adhered, I sever the adhesion. This produces phenomenal results in the nostril by way of getting rid of the crust formation, for such a big nostril cannot be cleaned in blowing the nose. Creating fleshy hypertrophy there, is the desideratum. I have had very nice results in probably a dozen such cases in the last few years. If crusts in the nose are a result of a chronic pus discharge from some sinus, that is quite another matter demanding appropriate treatment of the sinus or sinuses.

Adhesions.—Sometimes we find adhesions, usually after former surgery, which bind turbinate tissue to the septum. Usually they are small. If they are extensive, they decidedly interfere with respiration; if small, to a much lesser degree. Sometimes if the adhesions can be kept from readhering, after being severed, the enlarged turbinate will, after a few weeks, reduce to very ordinary size and leave adequate respiratory capacity; but often early after their being cut, leaving opposing surfaces without epithelial covering, they promptly reform. I have employed a method of keeping them from reattaching which I have found quite effective, but have failed to find any mention of its use in the literature. I have applied a silver nitrate solution of about 12 per cent strength and had them reform. It has occurred to me that if I would keep that application limited to cut surface of only one side, one might heal faster than the other and not adhere. To do that I shape a piece of paper, which I place in the nostril to cover one raw surface so that the silver nitrate application comes in contact with only the raw surface on one side, and the paper on the

other. I think that most often I apply the paper on the septal side rather than the turbinate, although it can be on either. Then after probably thirty seconds' time, or it may be longer, I spray a saline solution where the silver nitrate was applied, then take out the paper, and the silver nitrate effect then is only on one raw surface. The paper is put in for the reason that there is usually a limited space in which to go, with even a small cotton applicator, and without it the application would almost certainly be made to both opposing surfaces at once. If the adhesion has been extensive and the space small between turbinate and septum, I have often had, after a week's time, probably half of the adhered surfaces readhere, and needed to repeat the technique. In some of the worst cases I have had to apply it as much as three times before succeeding completely. If the adhesions are high, at the top of the septum in a narrow slit, it is not so easy to succeed as when lower down, on the middle or on the lower turbinate.

In many cases of children subject to frequent acute respiratory infections, there is an obstructed nose. Often much secretion present, and frequent repetition of sinus infection accompanies. Sometimes a good tonsil and adenoid operation, with intelligent attention to diet supplying deficient vitamin, will correct the trouble. Shurley, Stuckey, Jarvis, and many others have done much along that line.

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DISCUSSION

CHESTER H. BOWERS, M. D. (1136 West Sixth Street, Los Angeles).—The correction of nasal obstruction as presented in this paper merits careful consideration.

Shurley in 1927 (*Archives of Otolaryngology*, March) quotes the experiments of Anderson, of the Detroit College of Medicine, who occluded the nostrils of rabbits, guinea-pigs and puppies, with systemic effects varying from death to lowered resistance, predisposition to infection, impairment of vitality, dilation of the heart, marked changes in blood and skin, asthma and emphysema. Reopening of the nostrils gave relief from many of these conditions. Anterior septal dislocations are to be considered purely from the standpoint of mechanical obstruction. The same applies largely to the occasional inferior turbinate which, from an overgrowth and bogginess of tissue, mechanically causes discomfort. It is variation in the upper and back part of the septum that demands the finer diagnostic discriminations. Here we have contact disturbances of tissues innervated from the nasal ganglion, and with an intimate autonomic nervous system association.

I would also like to lay emphasis upon the age at which obstruction occurs. Nasal obstruction in early life is likely to do the greatest amount of damage. Not only may adjacent structures fail to undergo proper development, but the whole body fails to develop properly when nasal obstruction interferes with aeration and oxidation within the body.

Doctor Walker's treatment of synechia is most ingenious, and seems so reasonable that I am anxious to employ it. I thank Doctor Walker for the opportunity of discussing his excellent paper.



F. C. KRACAW, M. D. (411 Thirtieth Street, Oakland).—I believe that Doctor Walker has brought out two points which cannot be sufficiently emphasized. First, the desirability of doing a complete operation the first time, with particular attention to high deviations where only a very small abnormality is suffi-

cient to cause the patient to complain of obstruction, especially on inspiration. Second, the necessity for correcting turbinate hypertrophies. I am sure that we have all seen cases in which an excellent septum resection was done, but where results were disappointing because no consideration was given the turbinates. In my own experience actual removal of turbinate tissue has very rarely been deemed necessary; careful use of cautery is usually sufficient.

Doctor Walker's surgical handling of ozena is indeed interesting. I have seen no advanced cases of this type in recent years. In the past two years I have seen two cases which were only moderately advanced. I treated these with an autogenous antigen and lysate, prepared according to the method of Krueger, with very satisfactory results. Theoretically, this method should give equally good results in advanced cases, and I am awaiting an opportunity to try it.



M. W. HAWORTH, M. D. (Medico-Dental Building, Sacramento).—The subject dealing with nasal obstruction, and the proper method of operating, is certainly timely. The perforation of the septum is due, undoubtedly, to a failure to go thoroughly under the perichondrium by a too hurried dissection of the tissues, especially where they have been eroded. An erosion over the ridge or apex of the convexity makes such tissues very friable and easy to tear. As the doctor has suggested, an initial cutaneous incision far forward makes it easier to finish the operation when once under the perichondrium. As getting under the perichondrium is the crux, I find, in some cases, that the firmness of the tissues higher up makes an easier field for operation. An incision above the scar and eroded tissue, especially where the curved dissector is used, working forward as well as backward, simplifies the whole surgical performance.

With one of my early patients perforation followed, developing a whistle. This gentleman was quite critical, as the whistling troubled him greatly. I made an attempt to repair by suture, with the resultant breaking down of the tissues and a much enlarged perforation. This cured the whistle and eased his mind. Since that time, when it was not practical to repair, I have occasionally cured a whistler by enlarging the opening backward. Enlarging the perforation also tends to prevent a crusting. I am fully of the opinion that a careful initial incision and dissection should leave few perforations. The cutaneous incision undoubtedly facilitates a suture when necessary. The doctor's plan of straightening bent septums, by cross excisions and line incisions, is worthy of study. On account of the tendency of cartilage to resume its former shape, it will require quite accurate excisions to keep it in place. I think that this line of procedure is worthy of practice in many cases. The hypertrophy of the turbinate on the opposite side is usually due to increased function, and will subside close to normal in a few weeks' time, as a rule. I find patients usually quite pleased over the increased breathing capacity, so that if follow-up be possible, it may be desirable to treat this hypertrophy, if it does not approach normal size and function. Polypoid portions should be removed, and sometimes line excisions of the redundant tissue will bring a very happy result. I think Halle's operation, in cases where there are wide open spaces, is worthy of trial, and should and does improve a patient's comfort.

The author's manner of treating adhesions is quite unique. I have never used the nitrate of silver application, but I have used trichloroacetic acid application on the severed portions with very good results. The film of tissue slough protects the raw surface until healing begins. The silver application should produce the same results.

Doctor Walker mentions acute rhinitis attacks, small obstructions, *i. e.*, small spurs and ridges or hypertrophies, not necessarily sufficient to obstruct breathing; these may cause allergic reactions through supersensitizing the tissues. It is well to take this into consideration in the treatment of recurring rhinitis attacks.

THE LURE OF MEDICAL HISTORY*

FIFTY YEARS OF PROGRESS IN THE PREVENTION OF DISEASE†

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IV‡

THE RELATION OF FOOD TO DISEASE

THE relation of food to disease constitutes a problem of intriguing complexities. Space will allow for no more than a slight reference to a few diseases affected by diet.

Moses, who gave ample evidence of being the first great health officer, in Leviticus, Chapter XI, mentions this proverb: "And the hare, he is unclean unto you." Tularemia has as one of its principal reservoirs, the rabbit. Moreover, Moses mentions swine as unclean. Perhaps trichinosis, generally found in hog meat and recently so prevalent on the Pacific Coast, was not unknown or unsuspected in biblical times. Hippocrates (460-370 B. C.) thought there were essential nutrient elements extracted from food through some intestinal activity. One of the earliest American physiologists, Richerand, in 1813 noted that "whether we live exclusively on animal or on vegetable substances, the internal composition of our organs does not alter." In fact, Richerand stated that "there is but one food, but there exist several forms of food." Furthermore, this author assumed that this universal substance was of a gummy, saccharine character; he stated that those in decrepit old age live on sugar; chewing, he remarked, is a laborious employment for feeble and toothless jaws; and finally he maintained that milk contains a great portion of this universal substance. The great American army physician, William Beaumont, in his studies of the wounded Alexis St. Martin, in 1833, discussed "the perfect chyle or assimilated nutrient." William Prout, however, about 1850, spoke of "staminal principles," and then the great advance of biochemistry really began. Prout's "staminal principles" were designated as saccharina, oleosa and albuminosa. It remained for Magendie to differentiate various kinds of foods, and for Mulder to recognize albuminous substances from both animals and plants, and call them proteins. Later, Liebig's teaching that blood was the nutrient fluid received more than passing attention, and he classified foodstuffs as the nitrogenous group or plastic foods, and the non-nitrogenous or respiratory foods. Voit and his pupil, Atwater, defined food as material which in the body forms tissue or yields energy, or both.

* A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of CALIFORNIA AND WESTERN MEDICINE. The column is one of the regular features of the Miscellany Department of CALIFORNIA AND WESTERN MEDICINE, and its page number will be found on the front cover index.

† One of a series of public lectures by invited speakers, conducted by the Stanford University School of Medicine. From the Department of Public Health, San Francisco.

‡ Part I of this paper was printed in CALIFORNIA AND WESTERN MEDICINE, November, page 327; Part II, December, page 406; Part III, January, page 40.

Furthermore, Voit pointed out the fundamental fact that chemical analysis is no index to the food value of a substance. The work of Hart, McCollum, Steenbock, and Humphrey at the Wisconsin Experimental Station about 1908 demonstrated that rations have physiological values entirely distinct from their chemical constituents. The so-called "balanced ration" of proper amounts of carbohydrates, fats, and proteins was put to a test. McCollum and Simonds summarized these feeding tests. Chittenden's experiments, using foods poor in protein, seem to indicate that faulty diets were due to excessive consumption, especially in protein. Benedict, in 1917-1918, decided, from experimental data obtained on human beings, that abstemious diets do promote physical well-being.

From this brief discussion of the history of diets, one cannot help but realize that diet has a profound influence on general health.

The next historical phase was the technical use of animals, generally the white rat, in experimental studies on diet. This promptly led to the discovery of the "little things" in nutrition. Osborne and Mendel, using protein-free milk, found that rats grew to maturity. Therefore, this diet must have contained some unrecognized essential factor. McCollum confirmed this work. This factor is now known as vitamin A. McCollum and Davies (1913) stated that egg-yolk fats had practically the same effect on growth as butter fat, but that lard did not stimulate the same growth. Neither did almond oil or olive oil; but cod-liver oil did possess these same properties. Hopkins, in 1912, had already called attention to the effects of added milk. In 1913, Funk published his remarkable work on polyneuritis, or beriberi, and thus formulated the vitamin hypothesis. In 1915 it was stated that an adequate diet should consist of protein, carbohydrates, fats, inorganic salts, and the unidentified substance in certain fats such as butter, egg yolk, and cod-liver oil, and a second substance widely distributed in natural foods. Certain experiments with guinea-pigs, by Mendel and others, showed that they required a third substance, vitamin C, and for bone growth, a fourth substance, vitamin D. Evans and Bishop, of the University of California, demonstrated a fifth substance, now known as vitamin E, so necessary for normal reproduction in the rat. Goldberger's p. p. factor (pellagra preventive), also has to do with growth, and is now regarded as part of vitamin B. It is possible that many sources of vitamins are in the plant kingdom, and particularly do the green plants have their nutritive values. Deficient diets may impair generative functions and lead to certain specific disease conditions.

Fads in diet will continue to be noted. There is a middle ground, however, for, though satisfactory diets can be derived from vegetable sources, the additions that meat and eggs offer are effective aids. Wheat, oats, corn, and rice are our staples, but refrigeration and quick transportation are making it possible to obtain fresh meats and

fruits, tubers, root, and green vegetables. Rice, to its food-value detriment, is polished to make it keep better, like degerminated cornmeal. The sugar consumed per person per year one hundred years ago was about eleven pounds; today it is over one hundred, and still going up. Sugar contains no vitamins or minerals, but does supply energy.

Malnutrition plays such an important part in physical imperfections, which involve one-half of the nation, as to make nutrition problems of far-reaching significance. The estimates of physicians show that there are three million persons seriously ill, and that at least five hundred thousand die each year from degenerative diseases alone, some of the causes of which are directly or indirectly due to bad nutrition. The general fault lies in the lack of selective breeding, and of medical supervision or advice as to proper and adequate diets.

OBSESITY AND DIET

This is particularly true of those dangerous obesity diets, advertised as limited to a certain number of days and alleged to preserve a good figure.

There are two kinds of fat people: those who deliberately overeat, and those whose glandular secretions make them fat. Heredity has even been considered to play a part. Recently Newburgh and Johnston, carrying on some investigations at the University of Michigan, came to the conclusion that the normal person can maintain, by some not quite well understood physiological mechanism, a balance between the expended energy and amounts consumed. These investigators divide fat people into two groups: those with perverted eating habits, who never feel fully satisfied, and those of advanced age, or of changed occupation, who continue old habits, consuming the same amount of food as before. The basal metabolic rate, which is the true index of food utilization, may remain the same in the second type, but lessening energy due to age and occupation becomes a factor and counsels a revised diet.

The middle-aged person must not eat between meals; he must realize that ice cream yields 500 calories to the dish, and malted milk 500, while fats average 150 to the ounce. Such an individual habitually eats 50 to 100 per cent over his maintenance amount, and this excess must be used up in exercise or be stored as fat. The most that one can consume comfortably is about 3,500 calories a day. The average American consumes about 2,500 calories.

The mechanism of reduction of simple obesity is easily understood. It is generally considered that a loss of two pounds a week is sufficient. Therefore, if one figures that for every 270 calories withheld from the diet, one ounce of stored fat will be used, a reduction of 100 calories a day will use up four ounces, or twenty-eight ounces a week. For instance, a woman engaged in ordinary household activities should have a daily requirement of 2,350 calories. To reduce two pounds a week, restriction to 1,350 calories

is necessary. Since the body derives its overweight from fats and carbohydrates, these should be withheld principally. The protein intake, normally 100 to 120 grams, must be cut much less, for this food element influences metabolism. The reducing value of exercise is much overrated; exercise increases the demand for food and defeats dieting. The question of water intake, so often discussed, cannot be easily solved, but it should be kept within moderate limits. Drugs, soaps, binders, massages, etc., or the advertised fat reducers, may do more harm than good.

Undoubtedly obesity is a contributory factor in diabetes. This disease, heretofore infrequent, has been often called one of feeding and fatness. For instance, sixty-five years ago the mortality rate per 100,000 was about 1.4, but today it is 22.9. The mortality rate increases, however, with certain races and trades. There are three facts that the public should know about diabetes: first, that it is common after the age of forty; second, that it is frequent in fat people; and third, that the part heredity plays is not inconsiderable. There must be several million diabetics, many undiscovered, in this country alone. Periodic health examination is requisite to the care of this noncurable but apparently easily ameliorated disease. Children, before puberty, may develop obesity to an extreme degree, which will generally disappear when sex functions mature. The glands of internal secretion may be involved in some types of obesity, and the stoutness noted in the approach of menopause may be in this category. For physical fitness, girth control may be as important as birth control.

ANEMIAS AND DIET

Three to five per cent of the red blood corpuscles are destroyed each day. If food is deficient in the elements necessary to form stroma or hemoglobin, if hemorrhage occurs, or if intestinal infection with such parasites as hookworm, amebae, etc., is present, or if the patient is suffering from metallic poisoning, as lead, chrome, etc., then the condition known as anemia may manifest itself. There are two types, secondary and primary.

Secondary anemia follows or accompanies many diseases, such as scurvy, pellagra, goiter, rickets, and cancer. This condition can often be improved, when the cause is removed, by suitable chemicals. Whipple and his associates showed that an optimum amount of iron can control anemia in dogs, about 40 milligrams a day. There are 30,000 milligrams to the ounce. Therefore, the dog must consume 1/800 of an ounce. The amount of iron in circulation in the human body is stated to be 200 milligrams, and at least 10 milligrams are wasted daily. The adult human would ordinarily take 1/100 of an ounce or 280 milligrams. Other chemicals are also needed; manganese, and particularly copper, are the most important. Such foods as liver, kidney, beef heart, peaches, apricots, gelatin, lettuce, and eggs are of particular value. Of interest is the fact that spinach and cabbage act as stimulants, especially when eaten in conjunction with the extra iron. Iron has long been advocated in combating the anemia of preg-

nancy, and perhaps should be used in milk formulas, beginning in the two months' period of infancy.

PERNICIOUS ANEMIAS

This disease, long considered one of the mysteries of medicine, is, at least in its response to treatment, giving ample evidence of the value of scientific investigation. Much information is now available that it is a food-deficiency disease, probably due to the presence of some antistubstance. As in many diseases of a chronic nature, two factors are necessary for development of symptoms. The first, and probably most important, is some unwholesome biologic condition of the individual, either hereditary or acquired. The second factor is inadequacy of diet. The preventive substance is found in the liver and the kidney of sheep, beef, pig, and chicken. Koessler showed that pernicious anemia followed prolonged digestive disturbances, particularly affecting hydrochloric acid production or nonproduction. From experiments with rats, this author came to certain conclusions as to the rôle of vitamin A. Minot and Murphy seem to have established beyond question the fact that sufficient amounts of liver, or of a potent liver extract, will cause symptoms to disappear. To maintain this improvement, well-balanced diets are useful, the weight of the patient and all other aspects of the case being considered in planning them. The food should supply various proteins, liberal amounts of green vegetables and fruits, and the lessening of carbohydrates. Continued ingestion of liver, or its active principle, is necessary to avoid relapse. It is interesting to note the pathologic findings of Mettier. Patients dying in relapse showed pronounced hypertrophy of the Kupffer cells and marked siderosis of the liver cells, with no evidence of blood formation in the liver. The experiments of Castle and Locke demonstrated that meat fed to normal persons, and recovered by vomiting, contained an active principle related to pernicious anemia. This led to the work of Conner, who, using raw swine stomach, found that it contained a substance effective in increasing the number of red blood cells. Such scientific information is valuable, but the physician prescribing the feeding of liver should frequently check the blood findings, and increase the amounts or types of liver unless improved conditions are noted within ten days. Failure should not be considered until the patient has been given fresh liver for at least two weeks, a daily quantity of about sixteen ounces.

ASPECTS OF ACIDOSIS

Scientists have a technical dialect that often leaves the average person puzzled. One of their expressions is " pH " used in stating the acidity or alkalinity of a fluid. Suffice it to say that the figure 7 is used as the neutral point, and any figure in decimal or logarithmic multiples of tenths above 7 represents alkalinity, and any figure below indicates acidity. Chemically speaking, neutrality does not mean absence of acid or alkali, but the balancing point where acid and alkali counteract

each other. The hydrogen ions, carrying positive electrical charges, are designated as acid; and hydroxyl ions, carrying negative electrical charges, are designated as alkali. The hydrogen ion concentration of normal hydrochloric acid is used as a starting point, 0.0. The increasing power of the hydrogen ion concentration is, therefore, expressed with the small letter "p" in the symbol pH used. A pH of 7.38 in human physiology expresses the normal hydrogen ion concentration or alkalinity of the body. A range between 7.35 and 7.4 is within normal limits, but a drop to 7.3 to the acid side, or a rise to 7.5 to the alkaline side, means a metabolic disturbance. These are termed, respectively, acidosis and alkalosis. Absolute neutrality, or a pH of 7.0, in the human organism, is, therefore, incompatible with life. Usually, alkalosis appears when prolonged administration of alkalis occurs. Acidosis, however, may be the consequence of conditions within the body, since the body cells normally form acids. When it is realized that the slightest acid increase is fraught with serious results, then the importance of maintaining an even chemical balance within the body is manifest. There are two ways of doing this: neutralization through the alkali reserve of the body, and elimination through the skin, lungs, and kidneys. The urine and the sweat are normally acid. The blood, as stated before, is 7.38, or alkaline. The four basic alkaline salts in the body that make up our alkali reserve are sodium, potassium, calcium, and magnesium, and must always be in proper balance. They are emergency agents, the fire department, the health department, or savings bank of the human body. Really they are "buffer agencies." These chemical agencies are aided by any ammonia present. The importance of ammonia is not quite understood, but it arises in appreciable amounts, as noticed by the excessive odor given to urine if acidosis occurs. The lungs give off carbonic acid, and excessive amounts cause increased rates of breathing and shortness of breath. The condition of the skin varies in acidity, and increased activity may produce eczema, acne, and urticaria or hives. Besides these simple skin diseases, acidosis is noted in anhydemia, diabetes, nephritis, cholera, infant diarrheas, wood-alcohol poisoning, and severe burns. Marriott and Hartmann state that the contributing factors are evidence of normal acids, such as lactic, phosphoric and sulphuric; and loss of fixed base, maintenance or failure of maintenance of normal osmotic pressure.

Peterman has advocated the so-called ketogenic diet in epilepsy, and reported favorable results in continuous freedom from seizures for months. The diet suggested consists of twenty grams of carbohydrate daily, one gram of protein per kilogram of body weight, and the remaining caloric requirement in fat, after a period of fasting. The result is cessation of convulsions. This type of diet ordinarily produces acidosis. It is of interest to know that vegetables and fruits yield an alkaline ash in the laboratory and, likewise, in the body. Oranges, apples, pineapples, and tomatoes all of pronounced acidity, yield alkali in the course

of body metabolism. This does not hold true, however, as to grape-juice, prunes, plums, and cranberries. Therefore, dietotherapeutic alkalization with fruits must be used with some degree of intelligence. Curiously, the saliva of those fasting is acid, and after food intake the saliva loses its acid character, remaining around neutral for two or three hours.

This brief discussion should indicate the complexity of the chemical processes of the human body, with its infinitesimal combinations and reactions.

(To be concluded)

CLINICAL NOTES AND CASE REPORTS

CASE OF PNEUMONIA TYPE II TREATED WITH FELTON'S SERUM

By ALFRED C. REED, M. D.
AND
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REPORT OF CASE

P. M. C., male, age 52. Previous history of chancre spinal syphilis four years ago and a diagnosis of cerebrospinal syphilis four years ago, with positive spinal fluid findings to date. He has had intensive anti-syphilitic treatment for four years. General physical condition poor, with emaciation, nervousness, insomnia, and asthenia.

Present Illness.—Present illness began on the evening of February 11, 1933, with sudden onset of sharp "shooting" pains all through the trunk, soon localizing in the epigastrium and right half of the abdomen. Respiration was grunting and painful. No cough and no expectoration. His bowels had moved during the day. He was seen medically for the first time on the following morning, February 12. Temperature, 103 degrees Fahrenheit; respiration, 30; pulse, 120. There was extreme dyspnea with an expiratory grunt, ashen color, a small pleural friction rub at left base, with restricted movement. There was also fixation of right base with harsh bronchovesicular respiration and distant crepitant râles at end of inspiration. The abdomen was tender in general and well-splinted in both upper quadrants. The patient vomited once and had no expectoration or cough, except one small hemoptysis. (See Fig. 1, showing chart of temperature, pulse and respiration.)

Laboratory Findings.—These were as follows: Blood count—Leukocytes, 25,500, with 100 per cent polynuclears. The following day, February 13, the count was as follows: Leukocytes, 26,000; polynuclears, 82 per cent; lymphocytes, 17 per cent; mononuclears, 1 per cent; hemoglobin (Sahli), 89 per cent; red cells, 4,580,000. Blood culture, eighteen hours after onset was negative. Urine showed a trace of albumin and a few mixed casts. Smears and culture of deep pharyngeal swabs showed many streptococci, many micrococci catarrhales, many Gram-positive bacilli and a few pneumococci which agglutinated in Type II serum. On the morning of February 13, five cubic centimeters of bloody sputum were obtained and pure culture of Type II pneumococcus was obtained. Culture and typing were by Dr. Z. E. Bolin.

Treatment.—Consisted of specific Types I and II antipneumococcus serum of Felton's type (Parke, Davis & Co.) in doses of 10,000 units to a total of 100,000 units. Two doses were given intravenously, the second being followed by a chill. All the others were intramuscular. The chart shows the time and frequency of injections. The first injection was approximately forty-two hours after the onset. No other treatment was used except good nursing, absolute rest and high-calorie diet. The response is indicated on the chart. The patient improved clinically after the fourth dose, and in forty-eight hours was entirely comfortable. Physical signs cleared rapidly, with very little cough and expectoration. The patient left the hospital on February 25 with the lung findings normal.

COMMENT

This patient was an unusually bad risk for pneumonia of any kind, especially infection with Type II pneumococcus. The onset and development of the disease were unusually severe. The effect of the concentrated antibody serum was

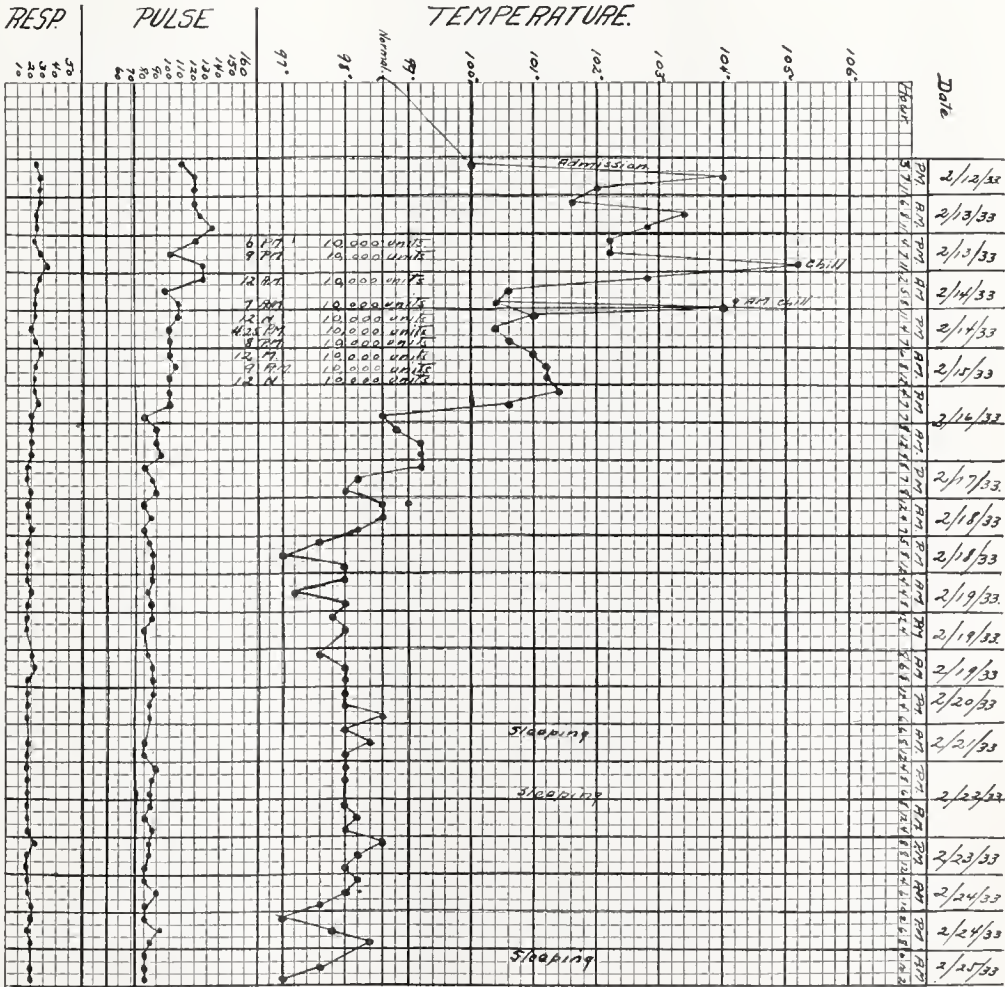


Fig. 1.—Chart of temperature, pulse, and respiration in case of pneumonia (Type II) treated with Felton's serum.

most emphatic and rapidly curative. It is to be noted that the patient received serum first some forty-two hours after onset, and that its use was continued at four to eight-hour intervals until definite improvement was established. Reference is made to an excellent paper by Finland and Sutliff (*The Journal of the American Medical Association*, 100:8, 560; February 25, 1933) for an extended review of the use of Felton's serum in Type II pneumococcus pneumonia. This case confirms the conclusions of these authors, as to curative value, need of early treatment and importance of large and repeated dosage.

The serum used is concentrated according to the method of L. D. Felton (Concentration of Pneumococcus Antibodies, *Journal of Infectious Diseases*, 43:543; December, 1928). Finland and Sutliff (loc. cit.) note the need of unusually large dosage of Type II pneumonia, because the serum is mixed Type I and Type II and the antibody titre is not so high as in the single Type I serum. They report that 13 to 23 per cent of all pneumococcus pneumonias are Type II, with a death rate of 30 to 46 per cent in nonserum treated cases.

350 Post Street.

INTRAUTERINE *B. WELCHII* INFECTION*

By OSCAR O. T. McALLISTER, M. D.
Oakland

THE purpose of this paper is to report a case of antepartum infection of the uterus, and its contents with *B. welchii*, in a woman with a contraction ring of the cervix, possibly due to treatment with radium fifteen months previously. Nothing has been done to show that radium could be instrumental in causing such contraction ring, though it is known that fibrous tissue is thrown down by the action of radium, and this is particularly true of it when used in the vagina.¹

REPORT OF CASE

Mrs. M. B., aged 28, white, American, entered the Highland Hospital of Alameda County February 11, 1933, at 11:45 p. m., apparently in labor at full term. She had not felt fetal movements for three days. She was immediately sent to the obstetrical ward and placed under observation. Her family and past history were irrelevant, except that in 1923 she had had a difficult instrumental delivery in which the baby was lost; and in November, 1931, she had come into the Highland Hospital for treatment for uterine bleeding, having been told that she had uterine fibroids. At that time she was given one intra-uterine treatment of 595 milligram hours of radium. Apparently, a small dose was used on account of the age of the patient, not wishing to sterilize her.

On her arrival in the ward, she was having fairly good contractions every ten minutes. A rectal examination revealed footling presentation; the membranes had ruptured on the way to the hospital. The pains stopped, however, some time between midnight and 6 a. m. By 9 a. m., February 12, there were no pains, but there was a moderate amount of peculiar brownish vaginal discharge. At 10:30 p. m., she was taken to the delivery room and prepared as for delivery, and an attempt was made to bring down the other foot.

Failing in this, a loop of bandage was placed around the presenting foot and traction was applied. The patient soon complained of pain, but not intermittent in character. Just before noon on February 13, a foul odor was noticed about the patient; and by this time the abdomen was becoming quite tense, and severe continuous pain was complained of. It was also noted that her pulse was becoming very rapid, and there was a slight rise of temperature.

I saw the patient again at 1 p. m., and at that time I noticed an extremely offensive odor, even before entering the patient's room. On external examination the uterus was found to be unusually hard, and crepitus was noted in both flanks. The patient was transferred to the delivery room and vaginal examination was made. The protruding foot was extremely emphysematous, and the cervix was firmly contracted around the thigh. Dr. E. N. Ewer, chief of the obstetrical staff, was called in consultation. He advised the injection of adrenalin chlorid solution M. X., with the idea of relaxing the contracted cervix. Forty-five minutes after the injection he made an attempt to dilate the cervix, but was unsuccessful. It was then noticed that gas was escaping from the uterus.

By this time the patient's pulse was 160 and the temperature 100.5 degrees. Being unable to dilate the cervix, incision of the same and extraction of the fetus was considered; but with the severity of the condition of the mother, and the fairly definite indications of gas bacillus infection, it was agreed that probably the best chance of saving her life would be by doing a Porro cesarean section.

A classical cesarean was done. The uterus was so greatly distended with gas that it seemed inadvisable to deliver it before opening. On opening it, gas escaped explosively. There was very little bleeding from the cut surface of the uterus. A dead baby was delivered, the cord cut and dropped back into the uterus and the uterine wound sutured with one continuous suture to prevent the escape of infectious material. The uterus was then removed, as would be done in any supracervical hysterectomy, and 2,000 cubic centimeters of tap water were given per rectum before the patient left the surgery. She was taken to the isolation ward about 5:30 p. m. in poor condition, and there was given clysis of 1,000 cubic centimeters normal salt solution and 12 cubic centimeters of polyvalaerobic serum intravenously, following which there was a mild reaction. At 11 p. m. the serum was repeated, and 25 cubic centimeters was given intravenously, along with 1,000 cubic centimeters of 10 per cent glucose solution.

On the following day another 25 cubic centimeter of serum was given, and this was repeated on February 15, making a total of 87 cubic centimeters of polyvalaerobic serum in three days, all intravenous.

On February 16 the patient's condition seemed improved, though she was still in critical condition, with jaundice present. The blood was examined on February 18: the hemoglobin was 56 per cent, with 3,600,000 red cells and 44,000 white cells. She, along with her relatives, was typed, and on February 20 she was given 500 cubic centimeters of citrated blood. There was a marked improvement in her general condition following the transfusion. However, a wound infection occurred, and on February 22 the lower end of the wound was opened and drainage established. On February 25 the blood picture was again observed, and the hemoglobin was 44 per cent. On February 27 the blood transfusion was repeated and improvement followed. By this time the abdominal wound was cleaning up, there was little drainage, and the tissue looked healthy. Vaginal examination revealed a moderate amount of pussy discharge. The cervix admitted the tip of the finger, and was freely movable. There was no induration or other evidence of local disturbance. The patient continued to improve, and was discharged on March 13 (just one month after operation) in good condition. I saw her in my office on April 6, and she seemed normal in every way.

* From the department of obstetrics and gynecology of the Highland Hospital of Alameda County.

COMMENT

Ordinarily, we would not consider cesarean section in a case with a diagnosis of dead fetus, but with the outcome as it was in this instance, we are convinced that our judgment was correct; for, had we incised the cervix and delivered the baby, leaving the uterus in position, there is little doubt in our minds that we would have lost the mother. Portions of the uterus were gangrenous, and almost no bleeding occurred upon incising it. The uterus was placed in a basin of formalin solution, and taken to the laboratory about 5:30 p. m.; the following morning it had about doubled in size, and gas was bubbling up all around it through the solution. Cultures were taken from the uterine cavity and walls at the time of operation, and smears made at that time showed many large Gram-negative rod-shaped bacilli. A diagnosis of probable *B. welchii* infection having been made, the patient was isolated; and this diagnosis was later confirmed by more extensive laboratory methods.

The mode of infection in this case is not known, since all examinations were conducted under careful aseptic precautions.

B. welchii infection in the uterus is extremely rare, there having been less than 100 cases reported to date. The first case reported was by Leduc² in 1597.

Toombs and Michaelson³ searched the literature in 1928, and Toombs alone again in 1932,⁴ and found 77 cases; and they added 2 cases, making 79.

Toombs analyzed forty-three cases, of which 61 per cent followed abortion, and 39 per cent were at, or followed, full-term pregnancy. Of the latter all accompanied, or followed, long, difficult labors. In one case the uterus was packed with mercurochrome gauze following manual removal of an adherent placenta; two days later the patient had a chill and showed other evidences of developing infection; and she died on the fourth day following, from *B. welchii* infection.

Of the cases studied by Toombs, there were 87 per cent mortality, and 81 per cent of those succumbed within the first five days. Over one-third of them died within forty-eight hours from the beginning of the infection. Due to the rapidity and severity of the infection it has been difficult to study methods of treatment. In the 13 per cent recoveries reported by Toombs, practically all of them had hysterectomies, and I am confident that the hysterectomy was instrumental in saving the life of our patient. I feel that too much stress cannot be put upon the importance of early surgery in cases of intra-uterine *B. welchii* infection, whether following abortion or full-term pregnancy. In addition, they should have the specific serum, blood transfusions, clysis and other supportive treatment, as indicated. This type of infection is always serious, and therefore demands early drastic methods of treatment.

The symptoms in our case were typical, as compared with those studied by Toombs, which were:

continuous pain in the abdomen, rise of temperature, rapid pulse out of all proportion to the temperature, foul odor, rapidly developing anemia and in most cases jaundice. One case has been reported⁵ in which the red count dropped from 4,200,000 to 2,100,000, and the hemoglobin from 70 to 32 per cent, in the course of six hours. The white count at the same time was high, ranging up to 125,000; our patient had 44,000 whites.

There appear to be two toxins thrown off by this infection—a hemotoxin and a myotoxin; and there is also a substance (leukocidin) formed by the organisms which protect them from the phagocytic action of the leukocytes.

230 Grand Avenue.

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4. American Journal of Obs. and Gyn. (Sept.), 1932.
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A SCREEN FOR ANESTHESIA IN OPERATIONS ON THE HEAD

By ROBERT B. HOPE, M. D.
Los Angeles

DURING the course of mastoid operations, as an anesthetist I have long felt the need of a screen that would be out of the surgeon's way and yet hold the drapery so that the attendant would have room to work and be able to see the patient's face while administering the anesthetic.

This I believe I have accomplished with the simple and inexpensive screen presented here. It can be attached to any of the standard operating tables. Two of the detachable screen holders, with set screws, are placed on the side of the table; the screen is then slipped into these in the usual manner. The tightened set screws hold the screen erect. If the mastoid is on the left side, the screen

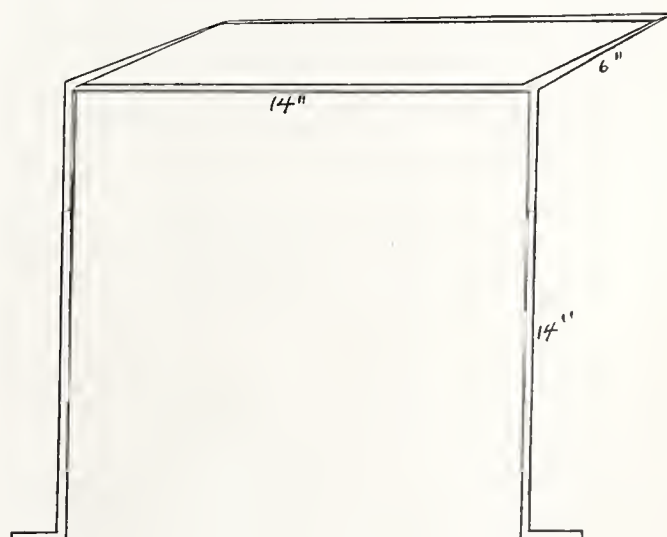


Fig. 1.—Detail of mastoid screen.



Fig. 2.—End view of table with screen attached.

Fig. 3.—Side view of table with screen attached.

Fig. 4.—Screen in place. Patient draped for surgery.

is attached on the right side of the table; and *vice versa*. The patient is placed as close to the edge of the table as possible, with a sand-bag under the shoulder. After the usual drapes have been arranged, a final sheet is draped from the head, anterior to the ear and straight out over the screen, and then tucked in about the patient's face. This forms a small recess in which the anesthetist can work and still be out of the way of the surgeon.

The details of the screen are explained by the diagram and pictures. It is made of solid metal in the form of a double letter "L," joined together by two cross-bars. The rear cross-bar is welded in, while the rest of the screen is made from a single piece of metal bent in shape in a vise. The dimensions may be varied as desired: I find 14 by 14 by 6 inches a very convenient size. The diameter of the metal used depends upon the diameter of the holes in the screen holders.

If a simple ether anesthetic is required, I have found it a great help to put a long drip nozzle on the ether can. This is easily done by using an adaptor with a ground-glass tip that will fit any standard hollow needle, and a long needle such as an old spinal puncture needle, about 20 or 22 gauge. A cork fitting the ether can is bored so that the adaptor will go through the cork. The adaptor and cork are placed in the ether can, and the needle on the adaptor. Ether will now drop very nicely from the free end of the needle, and in this way the ether can is held out of the way and does not disturb the drapery coverings.

1930 Wilshire Boulevard.

TREATMENT OF A SPRAIN

By EDWIN F. PATTON, M. D.
Los Angeles

IT is often said that the graduate comes out of medical school qualified to treat all the rare diseases, but ignorant of the common ones.

Sprains, especially of the ankle, are so common that they may not always be taken seriously by the attending physician. But to the patient they are serious enough, because of the excruciating

pain at the time, and the nagging ache afterward. Specialized and refined treatment which takes these facts into account is just as easy as any other kind, and is very productive of gratitude on the part of the victim.

Sprains are very painful, because of the accumulation of blood and edema in unyielding tissues, creating great tension. On this account the first principle of treatment is to relieve pain. This is done best by heat—soaks or wet applications where possible, dry otherwise—and repeated as needed. Analgesics also are in order.

The second principle of treatment is to *reduce* the swelling and *prevent* its continuation. In the extremities, especially the ankle, this is most effectively accomplished by the application of a Sir Robert Jones compression bandage, which consists simply of a layer of cotton batting, from one-half of an inch to an inch thick, applied widely over the swollen region and held in place by a fabric elastic bandage, wrapped on at such tension that constant compression or squeezing is accomplished, while circulation is not impeded. This dressing can be removed, when required, for soaks or heat treatment. Elevation of the foot, also, helps reduce the swelling. Efforts to control swelling should be applied as soon as possible, since it is easier to prevent than to reduce. Also the less the accumulation of fluid in the tissues, the less the resultant deposit of fibrin, scarring, and consequent after-aching on use and changes of weather. There should be no massage in the acute stage: massage then will only add to the irritation of already injured vessels and tissues.

The third principle is rest and relief of weight bearing. The Jones dressing serves as an admirable splint, especially if put on to include several inches above and below the injury. Bed, crutches, or rigid splints may be used in addition as necessary.

The fourth principle is judicious gradual resumption of use when healing processes have advanced to a suitable point. This point certainly is not reached until all swelling is gone and until there is very little, if any, tendency for swelling to recur on gentle motion. When this point is reached is the time when semirigid or rigid sup-

port is in order to replace the compression dressing. Adhesive tape or a plaster cast may then be applied. It is useless to apply these earlier, since they become loose and of no purpose as swelling recedes, and since they allow no access to the heat treatments which, in the early stages, are the only relief to the torturing agony. Adhesive applied over edematous areas may even increase the distress.

In the case of an ankle the compression dressing and full use of crutches are usually necessary for ten days to two weeks. After this a basket taping every week for a month, with the cotton-elastic bandage over the tape for extra support, will be needed. With the tape, the toe can first be touched down between the crutches, then gradually a little more, and a little more weight taken on the foot till at last the crutches can be discarded. If swelling recurs, use is progressing too rapidly,

If a little bone is pulled off at the site of the sprain, causing sprain fracture, the early treatment is the same, but plaster is better than tape in the secondary period. All ankle sprains should be x-rayed to determine this point.

The doctor who has experienced a sprain himself will give amen to this humane form of treatment, as contrasted with more usual schemes.

3875 Wilshire Boulevard.

TRICHOMONAS VAGINITIS

A SIMPLE EFFECTIVE TREATMENT

By E. W. AYER, M. D.

AND

J. M. NEIL, M. D.

Oakland

FOR the past few years numerous papers dealing with trichomonas vaginitis have appeared in the literature. This condition is gradually being recognized as a definite clinical entity, despite the fact that we are not yet able to satisfy Koch's postulates.

Two recent contributions* have stimulated us to submit the following observations:

1. Typical trichomonas vaginitis (a hyperemic vaginal and cervical mucous membrane containing many small punctate and/or flame-shaped areas of intense hyperemia; associated with a greenish gray discharge, often foamy, frequently blood-tinged, very irritating, profuse, containing trichomonas vaginalis, and often accompanied by urethritis) occurs with sufficient frequency to warrant clinical recognition.

2. Trichomonas infestation is frequently engrafted upon preëxisting endocervicitis; hence, all cases of vaginal discharge should be examined by the simple method of placing a fresh drop of the

material on a slide, covering with a slip, and observing with a high dry lens.

3. Trichomonas vaginalis has been found in a girl of six, suffering from nonspecific vaginitis; her mother harbored the parasite in her vaginal secretion.

4. Trichomonas vaginalis has been found in the secretion of a man suffering from nongonorrheal prostatovesiculitis; his wife harbored the parasite, and his genital involvement followed marriage.

5. Trichomonas vaginitis yields readily to treatment based upon the fact that trichomonas vaginalis requires an environment which is acid in reaction.

TREATMENT

We have used the following simple treatment for five years, with unvarying success: (1) Bicarbonate of soda orally until the urine is alkaline in reaction (usually two to three teaspoonsful daily). (2) A speculum is introduced into the vagina. The vaginal and cervical mucous membranes are swabbed clean with dry cotton applicators; any evident discharge is likewise removed from the cervical canal. The lower cervical canal is packed with sodium bicarbonate in powder form, following which one to two ounces of bicarbonate of soda (kitchen quality) is packed into the vaginal canal, while withdrawing the speculum. The patient is instructed to take a douche the following day, using one to two ounces of soda bicarbonate to one quart of warm water, assuming the position necessary to make the vagina act as a cup; for this is important to assure proper contact of the solution with the vaginal walls, it being surprising how many women take douches in a sitting position. The "soda pack" gives rise to a burning sensation for three to five hours, but most women are willing to endure it without sedatives. Treatments are given on alternate days, and an examination made for trichomonas vaginalis at each sitting. One to five packings reduce the number of parasites to a point where they cannot be found; the patient is then put on daily soda douches, and told to report following her next menstrual flow, at which time mild relapse is frequent unless cure has been effected. If trichomonas are found, "soda packs" are given as above until the patient is "microscopically free," after which daily soda douches; if relapse does not occur, douches are continued on alternate days and reëxamination made following the next menses, after which, if found free from parasites, treatment is discontinued. During the whole of this program the urine is kept mildly alkaline, the initial dose of soda being reduced from one-half to one teaspoonful daily. A very occasional case will relapse after two "menstrual negatives." Symptomatic relief from burning on urination and vulval irritation occurs within twenty-four hours from the institution of treatment.

We strongly suspect that the results obtained by Gellhorn can be attributed to the sodium bicarbonate contained in his compound.

We do not have a successful treatment for infestation of the genital tract of the male.

1706 Broadway.

* Gellhorn, George: Treatment of Trichomonas Vaginitis with Acetarzone (Stovarsol), J. A. M. A., 100:1765 (June 3), 1933.

* Frankenthal, Lester E., Jr., and Kobak, Alfred J.: Trichomonas Vaginitis in Children, J. A. M. A., 100:1746 (June 3), 1933.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

HOW SHOULD IODIN BE USED IN THE TREATMENT OF DISEASES OF THE THYROID GLAND

H. H. SEARLS, M. D. (University of California Medical School, San Francisco).—*Etiology and Diagnosis.* Iodin plays a very important rôle in the physiology of the thyroid gland. Its chief source for human needs has been through the presence of soluble iodids in drinking water. Recently the popular and rational use of iodized salt has offered additional iodin for the requirements of the body. The endemic foci of goiter throughout the world, with few exceptions, are associated with drinking water of extreme purity. Rarely, however, a factor of intestinal infection of a specific nature (as described by McCarrison in his many reports), appears to be associated definitely with the development of goiter.

As our drinking water proceeds from precipitation toward consumption, it leaches from the soil soluble salts including iodids. Many factors influence the amount of such salts which, in this natural manner, may be added to our water supply. Glaciated regions notably are free from soluble salts, these having been washed out by the large amounts of water resulting from the melting of the glaciers. The regions in which endemic goiter is found in the United States and Canada closely correspond to the area covered by the great glaciers of the Pleistocene period. In areas where precipitation is heavy, there is obviously a greater dilution of soluble salts in the drinking water. Transportation of drinking water by wooden, metal or concrete flumes and pipelines prevents its natural accumulation of soluble salts. In many of our large cities today, water thus travels from precipitation to consumption without opportunity for the accumulation of iodin. The addition of iodin in the proximal reservoirs then becomes a rational measure for public health. At present, for example, a chemical study of San Francisco's new water supply is being conducted. If the iodin content is found to be deficient, it is planned to add an adequate amount.

Endemic goiter is found in northern California in a horseshoe-shaped region extending northward along the Coast Range from Monterey to the northern boundary of the state, then eastward through the Siskiyou mountains and southward over the northern half of the Sierra Nevada. Pure drinking water is found throughout these regions, and the addition of iodin to the drinking water, or the oral administration of iodin to school children, undoubtedly would reduce the incidence of endemic goiter.

Endemic types of goiter are (a) the colloid and (b) the adenomatous. Adolescent goiter approaches the colloid type.

The colloid goiter is a diffuse symmetrical enlargement of the thyroid gland without toxicity, often associated with hypothyroidism. The gland is firm and granular, and varies from moderate to massive size. Although occasionally there is an uncomfortable sense of constriction of the windpipe, the usual complaint is that of disfigurement. Rarely, the administration of iodin results in the return of the gland to normal size. Far better results are obtained by the use of thyroid substance.

The adenomatous goiter also is encountered commonly in endemic regions. In this case the enlargement of the thyroid is caused by the development and growth of encapsulated nodules (adenomata) within the glandular substance. Starting insidiously, they gradually exert a toxic influence on the organism, manifested by tachycardia, tremor, increased nervousness, and emotionalism. Iodin (contraindicated in the nontoxic adenoma because of its tendency to stimulate the development of toxicity), is of little value in the treatment of toxic adenoma.

In the diffuse, symmetrical, toxic goiter of the hyperplastic (exophthalmic) type, iodin is of great value in the preparation of the patient for surgery. Diagnosis is made, in this condition, from the story of a rapidly developing toxemia evidenced by extreme nervousness, increasing exophthalmos, tremor, feeling of warmth, tachycardia, loss of weight, increased appetite, and hyperhidrosis; and by the presence of a diffuse, smooth, firm, symmetrical goiter, often exhibiting thrill and bruit. Blood pressure readings disclose a high pulse pressure. The basal metabolic rate usually is elevated quite markedly.

Frequently the patient with exophthalmic goiter receives iodin over a long period of time. In such instances, there is improvement for a period of several weeks, and then the patient returns to a condition similar to that found before Lugol's solution was administered. Such "iodin fast" patients have lost their best opportunity for cure by surgery. Operative risk is increased, and operation should be performed only with great skill and celerity. The postoperative course of these patients usually is associated with severe crises of hyperthyroidism.

It is evident, therefore, that, in exophthalmic goiter, iodin should be reserved for preoperative administration, and for a short period following surgical treatment.

In the rational use of iodin for the treatment of goiter, it obviously is required that the attending physician be able to differentiate between the different types, as treatment varies with the pathologic picture. Of particular importance is the differential diagnosis between toxic adenoma and

exophthalmic goiter. The following points may aid in the recognition of the type encountered:

HYPERPLASIA	ADENOMA
1. Exophthalmos (about 70 per cent of patients).	1. No exophthalmos.
2. Thrill and bruit over thyroid.	2. No thrill or bruit.
3. Symmetric goiter of uniform consistency.	3. Asymmetric nodular goiter.
4. Parallel development of goiter and toxicity.	4. Goiter of years' duration before toxicity develops.
5. Rapid development of toxicity to advanced degree, with periods of remission.	5. Slow progressive development to a moderate degree, without remissions.
6. Etiology—? psychic trauma; ? oral infection.	6. Etiology—endemic.
7. Typical blood pressure, 140/60.	7. Typical blood pressure, 160/100.
8. B. M. R. ranges from 40 to 70 per cent plus.	8. B. M. R., from 25 to 50 per cent plus.
9. High percentage of lymphocytes.	9. Normal blood picture.
10. Rarely substernal or intrathoracic.	10. Most substernal and intrathoracic goiters are adenomatous.
11. Rarely any pressure signs or symptoms.	11. Commonly pressure is a main complaint.

* * *

CLARENCE G. TOLAND, M. D. (1930 Wilshire Boulevard, Los Angeles).—In 1200 A. D., Roger of Palermo advocated burnt sponge in the treatment of goiter. Coindet, the Swiss physician, established iodine as the effective agent, in 1829. Following that time, for nearly one hundred years, iodine was alternately praised and condemned. Trousseau, in a brilliant therapeutic mistake, discovered its value in toxic goiter. Kocher, with his imposing influence, condemned it, and its use was abandoned.

Plummer, again in 1922, by an incontrovertible array of clinical tests forced the recognition of its value on a partly believing, partly skeptical medical world. Eight years ago a distinguished doctor, in *The Journal of the American Medical Association*, said iodine was "a double-edged sword, with its sharpest edge menacingly turned toward the patient." In the last few years, however, we have come to learn that it is a shield protecting the patient from the fury of Graves's disease.

We do not understand how iodine works, but we do know what it does. Why iodine, on the one hand, should prevent the accumulation and storage of colloid in a patient with endemic goiter and, on the other hand, promote such storage of colloid and formation of normal thyroxine in the patient with Graves's disease, seems contradictory. A consideration of the normal iodine metabolism is essential to an understanding of how iodine operates.

An infinitesimal daily dose of iodine, .16 milligram or about 1/400 of a grain, is all that is required to keep the body in iodine equilibrium. In Graves's disease the usual iodine dosage has been about 100 to 400 milligrams per day in the form of Lugol's solution. We are thus giving 600 to 2600 times the physiologic requirement of the body. Thompson, in Boston, has found that one minim of Lugol's solution, or 6 milligrams daily, will effect a maximum reduction of basal metabolism in Graves's disease. This is an interesting fact, but we feel that it is neither advisable nor safe, as an excess of iodine is not dangerous. We

always give about 15 to 20 minims, which we feel is a safer procedure.

The maximum improvement of patients with Graves's disease, previously untreated with iodine, occurs in about eight to fourteen days. The rate of improvement depends chiefly upon the intensity of the intoxication, and also the manner in which the disease was progressing spontaneously before the iodine was started. Occasionally a patient may not respond, or may become worse. These are the cases illustrating to us the fact that the story of iodine effect has not yet been written.

We use iodine in both patients with Graves's disease and those with toxic nodular goiters, and have encountered very few cases of so-called iodine hyperthyroidism. It should be a rule not to employ iodine in patients with nontoxic adenomas, as there is the risk of inducing iodine hyperthyroidism.

We decry the prolonged use of iodine for toxic goiter, save for a very rare type of mild hyperthyroidism in the young adult, where it may be used in small doses with careful observation.

The moderately and severely toxic patients, receiving prolonged iodine treatment, will eventually require surgery, will be poorer surgical risks, and will account for a decidedly higher mortality.

The indications for the use of iodine other than for the preoperative preparation of the patient with toxic goiter are few. About one in two hundred patients following thyroidectomy will develop some postoperative hyperplasia, with varying degrees of return of toxic symptoms. A certain percentage of these may be kept under control by the intermittent administration of iodine.

In hyperthyroid crises following subtotal thyroidectomy, we routinely give sodium iodide by vein, and feel that it is of value in certain cases. The blood iodine is low, following subtotal thyroidectomy, and it may operate by supplying that deficiency; but we do not believe that it has any specificity in the treatment of crisis. It is difficult to evaluate the efficacy of any procedure here, as many therapeutic measures are usually resorted to in such a crisis.

The use of iodine for adolescent goiter has an established place, and is definitely effective.

In all these types where iodine is used, we must remember that we are not treating the cause of goiter by giving iodine, and that by any type of indirect therapy we always shall beget some failures. But until the etiology has been definitely established, we must be grateful for such a powerful ally as iodine in the treatment of goiter.

* * *

A. B. COOKE, M. D. (504 Medico-Dental Building, Los Angeles).—It sometimes happens that discussion of the abuse of a remedy or measure becomes fully as important as discussion of its use. I am persuaded that this is true in the present instance. Probably nowhere in the whole range of clinical medicine can be found a more conspicuous example of the association of good and evil possibilities in a single medicament, than in the case of iodine in the treatment of diseases of the thyroid gland.

Others have presented the benefits of iodine. The present writer accepts the much less inviting

part of emphasizing its possibilities of harm, and sounding an earnest note of caution.

Somewhere in his numerous contributions to the study of the goiter problem, Crile poetically says that the "thyroid gland is the musical instrument upon which nature plays the tune of life," or words to that effect. In similar fanciful vein it may be said that iodine determines the key and pitch of the tune, whether it shall be one of enchanting harmony or one of discordant jazz.

That iodine has a place, and a most important place, in the therapy of goiter, is a firmly established fact. But we shut our eyes to an equally important fact when we fail to realize that its indiscriminate use constitutes a distinct and widespread menace. In reality it is a two-edged sword, as potent for harm as for good. To employ the agent merely because there is a goiter, is often to woefully misuse a valuable remedy, with serious and not infrequently disastrous consequences to a confiding patient.

And yet this is exactly what occurs so constantly that it may almost be regarded as established routine. I see few cases of any type in which iodine, in some form, has not already been resorted to by the patient; either upon misinformation acquired from the public press or some well-meaning friend, or, sad to say, often from the profession itself.

Surely the members of the medical profession are not willing to acquiesce in the imputation of carelessness or lack of ability to discriminate. The indications for the use of iodine in goiter therapy are definite and easily understood. It can be considered curative only in certain cases of the simple or nontoxic variety. In toxic goiter it can never be considered curative. True, toxic hyperplastic goiter usually responds magically to the proper exhibition of the remedy, but the response is always temporary. If the iodine is persisted in, the patient will very probably become immune to it, with subsequent return of the toxicity.

In toxic adenoma iodine is to be employed with great caution, if at all. There can be no question that it is capable of much harm in these cases.

Therefore in toxic goiter—since iodine is not curative in any type of case, and since its beneficial action at best is only temporary—it follows that the sole purpose in administering it should be to control symptoms and to prepare the patient for safe surgery.

In colloid goiter there is already a superabundance of iodine stored in the gland. To administer more would seem to be adding insult to injury. When for any reason nonsurgical treatment is adopted in this type of case, far more favorable results may be expected from thyroid extract than from any form of iodine. In the absence of toxicity the disfigurement is the only indication for intervention, and here surgery certainly offers more than any kind of medicinal treatment.

One other abuse calls for protest. Many erroneous ideas are prevalent in regard to "iodized salt." Lay publications and billboards are utilized by sundry commercial interests to promote the consumption of this so-called table necessity. A moment's

reflection should make it clear that the claims made are both false and pernicious. Iodized salt provides an easy means of increasing the iodine intake; but rightly conceived, the only indication for its use is the prevention of endemic goiter in districts where there is a deficiency of iodine in the diet. And it is agreed by those in position to know that the efficacy of the agent is limited to the prepuberty years.

When iodized salt replaces ordinary salt as a condiment, adults as well as children partake of it. The possibility of harmful results is apparent. There can be no doubt that in latent cases of nontoxic adenoma active symptoms are often excited. In toxic adenoma it may stimulate to increased toxicity, and in hyperplastic cases the dosage is wholly insufficient to control the symptoms.

All this would seem to be obvious in the mere statement. Yet a half-page advertisement appearing in current issues of *The Journal of the American Medical Association* contains the remarkable statements, quoted from the report of the Committee on Foods: ". . . Iodized salt is for all table and cooking uses of salt," . . . "Used daily as the only salt on the table and in cooking," . . . !!

The profession of California is to be congratulated that CALIFORNIA AND WESTERN MEDICINE has not succumbed to this insidious form of questionable commercialism.

Value of Calcium in Preoperative Preparation.—Evans presents a preliminary report on the routine use of calcium in preoperative preparation. Each adult patient is instructed to eat a sufficient amount of plain food (meat once a day, not fried), to drink at least one glass of milk with each meal, six glasses of orange juice daily, two and three ounces of stick candy daily, to take deep breathing exercises at least three times each day, to see that the bowels move every twenty-four hours, and to sleep at least nine hours each night. On the morning of the third day before operation, each adult patient receives a sufficient amount of calcium so that there will be a slight hypercalcemia at the time of operation: three grams of calcium gluconate by mouth immediately after each meal. On the night before operation, 10 cubic centimeters of a sterile 10 per cent solution of calcium gluconate is given intramuscularly and a sufficient amount of alkali so that the urine will be slightly alkaline on the morning of operation. A plain soap-suds enema is given on the evening before operation, and at bedtime 0.1 gram of phenobarbital is given by mouth. Three-quarters of an hour before the operation each patient receives from 0.008 to 0.016 gram of morphin sulphate intramuscularly. After the operation, a retention enema of from 500 to 800 cubic centimeters of tap water is given. As soon as the patient begins to react from the anesthesia, 10 cubic centimeters of a 10 per cent sterile solution of calcium gluconate is given intramuscularly and the patient is placed in a slight Fowler position. No abdominal binders or tight abdominal dressings are used. Fluids, if desired, are given immediately after operation. The patient is turned on the side every three or four hours, and during the first four or six days is made to take a series of deep breaths three or four times a day. During the first three or five days, especially in upper abdominal operations, a sufficient amount of morphin sulphate is given intramuscularly to prevent any sharp pain, restlessness or fear. A small rectal tube is used if there is any distention. Enemas or cathartics are given on the third or fourth day after operation. Patients are catheterized if they do not void within twelve hours after the operation, and every eight hours until they void voluntarily. Dressings are not changed except to remove drains and sutures.—*N. J. Medical Society Journal.*

California and Western Medicine

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Leaflet Regarding Rules of Publication.—California and Western Medicine has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this journal write to its office requesting a copy of this leaflet.

matters of vital importance to scientific and organized medicine will come up for discussion and decision.

EXCELLENT WORK

A Flying Squadron: Why Not More of Such?—There has come into being during the last year what might be called the “Flying Squadron” of the California Medical Association.

A small group of physicians, headed by Dr. George G. Reinle, president of the Association, and including Dr. Charles A. Dukes and Dr. Walter M. Dickie, chairman and director, respectively, of the California Medical Association Public Relations Committee, and Dr. Benjamin Black, medical director of Alameda County, has held itself subject to call by component county societies or other bodies interested in or allied to scientific and organized medicine.

Talks have been given before the Solano and Napa county medical societies, at Vallejo; the Santa Clara county society, at San Jose; the California League of Municipalities, at Santa Cruz; the Fresno county society, at Fresno; the Long Beach group, at that city; the Alameda County Dental Association, at Oakland; and other organizations. The four physicians mentioned have spoken at most of these meetings, and the subjects discussed have included many phases of medical economics, with special emphasis on county plans in preventive medicine.

With the Alameda County Plan now entering the second year of its existence, it has been possible to report on the results achieved during the first twelve months. This task has fallen to Doctor Reinle who, in his last talk before the dentists of Alameda County, was able to state that, during the first twelve months of its operation, the Alameda County Plan provided medical service on a part-pay basis to 1,742 persons. At the same time, he reported on the progress of somewhat similar plans as inaugurated by component county medical societies in other parts of California.

In his address before the California League of Municipalities at Santa Cruz, President Reinle strongly advocated a matured program of preventive medicine as the natural and necessary sequence to general public health work. In this connection, he urged a closer coöperation between county medical societies, and county and municipal health departments.

At the various meetings the speakers of the “Flying Squadron” have pointed out the necessity for unified effort on the part of the medical profession, to the end that present-day problems might be solved along constructive lines and the menace of state medicine reduced.

The success attained through the visits of this one group of officers should commend the plan to other sections. California is a large state, geographically, and different portions all have their respective problems. The California Medical Association, and also public health work, would profit, if three or more such “Flying Squadron” groups should come into existence.

EDITORIALS*

RIVERSIDE ANNUAL SESSION

This Year's Annual Session to Be Held April 30 to May 3.—One of the official California Medical Association notices in this number of CALIFORNIA AND WESTERN MEDICINE is an announcement of the next annual session of the California Medical Association, which this year will be held at Riverside; the meetings to commence on Monday, April 30 and to continue through most of Thursday, May 3. The attention of members in all parts of the State is called to this notice,† with the thought that many physicians will begin to plan to be present. The local committee of arrangements, of which Dr. W. W. Roblee of Riverside is chairman, is making earnest efforts to provide all possible facilities for a pleasant and profitable session. The progress report of the Committee on Scientific Program to the Council indicates that section meetings will measure up to the excellent standards of recent years. The officers, therefore, urge all members who can arrange their work to make an effort to attend this meeting, at which

*Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comments column, which follows.
† Notice is printed on page 125.

A PROPOSED CULTIST INITIATIVE LAW

Primary and Final State Elections Will Be Held in California in 1934.—It is not too early to remind the five thousand members of the California Medical Association that primary and final elections will be held for state offices in California in this year, 1934. At these elections it is possible that a number of initiative petitions for enactment of laws by vote of the citizens will also be submitted to the electorate. The draft of one such initiative, which deals with the practice of the healing art, has come to the desk of the editor. It is here reprinted in part, because a perusal of some of its paragraphs should provoke suggestive thought on the task ahead. The naturopathic group had two bills before the last legislature, but each measure died in committee. We have been told that the leaders of the group now propose an initiative law as an easier, even though more costly, means of gaining their ends. What the proponents of this group hope legally to obtain for themselves becomes evident when the following excerpts from the draft are read:

EXCERPTS FROM PROPOSED NATUROPATHIC INITIATIVE

An act to create a public corporation to be known as the "Naturopathic Association of California," to provide for its organization, government, membership and powers, to regulate the practice of naturopathy, and to provide penalties for violation thereof.

Naturopathy is hereby declared to include physiotherapy, physical therapy, phytotherapy, and the use of antiseptics, anesthetics, biochemistry, and the science and art of diagnosis, applied therapeutics and prophylactic hygiene and sanitation, which enables the naturopathic physician to direct, advise, prescribe, dispense and apply food, water, roots, herbs, plants, oils, lights, heat, color, exercises, active and passive manipulations correcting vital tissues, organs or anatomical structures by manual, mechanical, electrical instruments and appliances, x-ray or any and all natural agencies that have been used in the past, that are now in use, or that may be used in the future, to assist nature to restore a physiological and psychological interfunction for the purpose of restoring and maintaining a normal state of health, mentally and physically.

Creates a public corporation to be known as the "Naturopathic Association of California," which shall have perpetual succession with power to sue, enter into contracts, deal in real and personal property, establish and maintain colleges, hospitals, clinics, libraries, and do all things for the advancement of naturopathy.

No law now or hereafter enacted shall qualify, regulate, restrict or prohibit the S. N. A. from fully carrying out, "all the purposes and provisions herein contained."

All jurisdiction over naturopathy is vested in the "Naturopathic Association of California."

Anyone will be considered a member of the Naturopathic Association of California in good standing who complies with provisions Sections 39, 40, 41:

39. Anyone who for one year prior to the effective date has been engaged in some form of drugless practice in California (without requirement that they had been previously licensed).

40. Above, by passing an examination, will be granted right to do minor surgery and give anesthetics.

41. Those who have practiced naturopathy in this State for ten years will be licensed. A governing body of one member from each Congressional District. Members of the Board of Governors elected annually by a system similar to the Bar Association.

63. Naturopathic physicians shall have all the rights and privileges of any and all other practicing physicians of any class in the treatment of any and all diseases, injuries, deformities or other mental or physical conditions. Also same privileges in all "institutions supported wholly or in part by public funds and to disability compensation. . ."

Section 3 states: "No law now or hereafter enacted shall in any way qualify, regulate, or prohibit the State Association from fully carrying out and effectuating all the purposes and provisions herein contained."

THIS AND THAT

San Fernando Plan.—The San Fernando plan of caring for the indigent sick residing in districts somewhat distant from metropolitan centers came into existence in Los Angeles County, and was commented upon in the December CALIFORNIA AND WESTERN MEDICINE, page 417. In that county the physicians in the suburb of San Fernando became dissatisfied with the manner in which a health center curative clinic (maintained in connection with the County Health Department, and to which they were giving gratuitous services), was being conducted. The physicians who were serving in the clinic decided to no longer give such services as a clinic group. Through the county hospital authorities, arrangements were then made to send the indigent sick to the offices of the physicians, a small nominal fee being paid by the county for the use of the offices and facilities of the physicians. It is interesting to note that the clinic staffs in the cities of Long Beach, Compton, Glendale, and Pomona have recently also adopted the San Fernando plan. At Alhambra the attending staff is aiming to follow suit. The health center clinics which are still operating under the old system are those at Inglewood, Santa Monica, Whittier, and Belvedere.

With this wider use of the San Fernando plan, it should shortly be possible to have a clearer estimate, both of the comparative money costs and of the professional merits of the system. In its emphasis on maintenance of the personal physician-patient relationship, the plan makes a real appeal to organized medicine.

* * *

Newspaper Publicity on the Charity Work of Physicians.—On January 11, several Los Angeles newspapers printed interviews with Dr. Harry H. Wilson, secretary of the Los Angeles County Medical Association, in which he discussed at some length the great increase in present-day costs of caring for the indigent sick, and the *Examiner* black-faced the following statement:

"In 1931 it was figured that charity work in the county of Los Angeles amounted annually to ten million dollars, these figures being based on compensation or industrial accident fees, which are considerably less than ordinary fees."

The articles printed were a type of publicity which should find a place in the columns of the lay press, much more than has been the case in the past. The medical profession is paying the price of overgreat modesty in having for so many years refrained from telling what are the approxi-

mate money values of the gratuitous services rendered by physicians in public and private hospitals and clinics. It is hoped that more of such articles and interviews will find space in the newspapers, because their perusal should lead lay citizens to stop and think, and give at least a passing gesture of appreciation to the physicians who make such massive donations to the indigent sick and to the taxpayers. The present-day civilization is one in which propaganda is a powerful force. The medical profession has no wish to engage in cheap advertising, but, on the other hand, it is not necessary, in worship of abstract medical science or ethics, to minimize or keep secret the enormous amount of professional services (and their money valuation) which a host of medical men and women most generously give to the many hospitals and clinics in California.

* * *

Educational Standards of Law and Medicine.—Hon. Chester H. Rowell, prominent California publicist, in his San Francisco *Chronicle* column recently gave expression to some viewpoints on medical and legal curricula and licensure that should be of interest to members of both professions. He spoke, of course, of the standards of nonsectarian, or regular, so-called old-school medicine, and not of cultist groups who, in recent years, through their respective boards, have licensed many practitioners possessing little more than a common school preliminary education, and whose professional training, as given in cultist institutions, was woefully below the standards set by modern scientific medicine. It should be reassuring to note that lay writers have been keen to observe the progress made in medical training during the last twenty-five years. The legal profession is in a splendid position to enforce higher standards, because the State Bar has as its capstone of organization, the Supreme Court of the State, certainly a strategical advantage of real value.

Mr. Rowell's comments follow:

Another educational anomaly.

Forty applicants took the State examination to practice medicine, and thirty-five of them passed.

At the recent State Bar examination the total number of applicants was many times forty, and the vast majority of them failed.

There are States in which, for years, every applicant has passed the medical examination. In practically every State, nearly all of them pass. There is no State in which so many as half the applicants pass the bar examinations, and in some States as many as nine-tenths of them fail.

The difference is not that the medical examination is easier. It is, on the contrary, very much harder. The difference is that all the applicants for entry into the medical profession have received a proper educational preparation, while very few of those applying for the bar examination have done so. These few all pass, most of them at the first trial and the rest at the second.

To try for the medical examination, the aspirant had first to graduate from a university at which his last two years were spent at premedical work, and he had to be one of the few best ones in his class. Then he had to spend four years in a first-class medical school, in which nothing but good work was tolerated. If he lacked the brains, the character, the diligence

or the serious purpose required, that was found out long before he came up for the examination. The failures were weeded out in advance.

Until recently, the candidate for admission to the bar did not have to know anything but law, and he need not have studied that in a first-class school. Now he does have to be a high school graduate or its equivalent. He may have studied his law in a school nearly all of whose graduates habitually fail, and he may have none of the qualities necessary for a lawyer. Nevertheless, he is permitted to waste years of effort, only to be rejected at the end. It is unfair to him and to the State.

Some day the bar itself will demand that the law be a learned profession.

* * *

Great Britain Considering Human Sterilization.—As readers of CALIFORNIA AND WESTERN MEDICINE will recollect, the subject of human sterilization was treated briefly on page 59 of the issue for January. When it was stated that Germany's marked departure from previous methods of handling human beings who are hereditary defectives was almost certain to bring about increased attention elsewhere to the pros and cons of such procedure, it did not occur to us that, within the short period of one month, announcement would be made that the British Government also was considering the desirability of adopting a human sterilization plan; the possibility of which official action adds to the medical interest in a paragraph from *Time*, reading:

German physicians who fail to report patients who ought to be sterilized were threatened last week with a fine of 150 marks (\$56).

The following Associated Press cable from London, dated January 18, gives further information as to what our British cousins are deliberating:

A British Government committee tonight recommended the legalization of voluntary sterilization for mentally defective and some physically defective persons.

The recommendation was made in a report of the committee appointed early last year by the ministry of health for a study of the problem.

The recommendation itself is in the form of a bill for a law which would recommend sterilization of such physical defectives as are shown to be carriers of a grave physical disability which is transmissible.

The bill provides that an operation for sterilization would be performed only under a written authorization by the minister of health.

Applications for the authorization would have to be supported by a recommendation signed by two medical practitioners, one of whom should, if possible, be the patient's family doctor and the other a practitioner on a list approved by the ministers.

Sterilized mental defectives would receive such supervision as required after the operation.

In all cases where a patient is capable of giving his consent, the bill provides he should sign a declaration of his willingness to be sterilized.

CALIFORNIA CHIROPRACTIC ACT—AN IMPORTANT SUPERIOR COURT DECISION

Judge William F. James Hands Down Decision on Scope of California Chiropractic Act.—Just as this February issue of CALIFORNIA AND WESTERN MEDICINE is going to press, the editor has ob-

tained a copy of the opinion (No. 43645) rendered on January 16, 1934, by Judge William F. James of the Superior Court at San Jose, Santa Clara County. Judge James's opinion was on a suit in which appeared:

THE PEOPLE OF THE STATE OF CALIFORNIA ON
THE RELATION OF THE CHIROPRACTIC LEAGUE
OF CALIFORNIA, a Voluntary Association,

Plaintiff and Cross-complainant,

vs.

ROSCOE C. STEELE and LOIS B. STEELE, partners
doing business under the style of DRS. STEELE &
STEELE,

Defendants,

vs.

GLEN J. SIPES and J. K. CHRISTIE, and ASSOCIATED
CHIROPRACTORS OF CALIFORNIA, a Voluntary
Association,

Interveners and Cross-defendants.

The legal viewpoints as expressed by Judge James should be most interesting not only to the laity but to practitioners of the healing art. This comment is made in order to call special attention to Judge James's opinion, which is printed in this issue of CALIFORNIA AND WESTERN MEDICINE, page 142. Every member of the California Medical Association may well take the time to read the opinion, and it is to be hoped that all will do so.

EDITORIAL COMMENT*

CULTURAL LAG IN CLINICAL LOGIC

From a philosophical point of view the decade or more that often elapses between the discovery of a basic biologic fact and its general recognition in practical clinical logic, constitutes an interesting social phenomenon. To the busy practitioner, however, this cultural lag is of greater moment: the constant fear that there may be well confirmed basic facts with which he is not familiar, and yet which, if known, would modify his apparently logical diagnosis or methods of treatment.

Thirty-two years ago Levaditi¹ noted that alien erythrocytes injected into homologously immunized animals are often phagocyted before they can be hemolyzed. He regarded this phenomenon as of little clinical interest, since the ingested blood corpuscles were eventually digested by the leukocytes. Seven years later, however, Deycke and Much² raised the phenomenon to one of clinical importance. From histological evidence they concluded that the processes of phagocytosis actually isolates tubercle bacilli from the effective defenses

of the animal body, the phagocytes themselves showing little ability to destroy the ingested bacilli. Their conclusion was afterwards confirmed by American investigators,³ who found that, while tubercle bacilli are rapidly "lysed" in the peritoneal cavities of tuberculo-immune guinea pigs, little or no lysis is demonstrable in the bacilli taken up by the local phagocytic cells.

This immunologic paradox was afterwards studied in detail by Doctors Rous and Jones,⁴ of the Rockefeller Institute, who found that typhoid bacilli, taken up by living leukocytes, are not only protected from injury by homologous antisera, but are also protected against destruction by otherwise effective chemical antiseptics. Generalizing from these findings, the New York investigators emphasized the fact that cytoplasmic protection from antibodies and chemotherapeutic agents "should be taken into consideration in the study of diseases caused by infectious agents capable of living within tissue cells."

In spite of this emphasis, however, the possibility that the specific serum therapy of certain infectious diseases could be effective only in the initial, prephagocytic, or extracellular stages of the infection, has been generally ignored in practical clinical logic. Since convalescent human serum, for example, or antiserum produced by immunizing horses against poliomyelitis virus will kill or neutralize poliomyelitis virus *in vitro*, such serums have been regarded as presumptive cures for infantile paralysis. The Rous-Jones phenomenon would have suggested that the intracellular location of this virus would render the success of specific serum therapy highly improbable in this disease.

Doctors Rous, McMasters and Hudack,⁵ therefore, have repeated their tests of eighteen years ago under conditions that should demonstrate their probable clinical applicability. Suspensions of rabbit embryonic fibroblasts were inoculated with vaccinia. Both viable and nonviable rabbit cells were found to absorb but not to destroy this virus, the thoroughly washed virus-impregnated cells causing typical vaccinia lesions on subsequent injection into rabbits. Specific immune serum, which, in control tests, would kill or neutralize free vaccine virus, was found to be viruscidal against the virus on or within the dead tissue cells. Tested with living tissue cells, however, the same antiserum was without demonstrable viruscidal effect. Exactly the same cytoplasmic protection was demonstrable with the filtrable agents causing rabbit fibroma and chicken sarcoma.

Stanford University.

W. H. MANWARING,
Palo Alto.

* This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

¹ Levaditi, C.: Ann. Inst. Pasteur, 16:233, 1902.

² Deycke, G., and Much, H.: München med. Wchnschr., 56:1985, 1909.

³ Manwaring, W. H., and Bronfenbrenner, J.: J. Exper. Med., 18:604, 1913.

⁴ Rous, P., and Jones, F. S.: Ibid, 23:601, 1916.

⁵ Rous, P., McMasters, P. D., and Hudack, S. S.: Proc. Soc. Exper. Biol. and Med., 31:90 (Oct.), 1933.

STATE MEDICAL ASSOCIATIONS

This department contains official notices, reports of county society proceedings and other information having to do with the state associations and their component county societies. The copy for the department is edited by the state association secretaries, to whom communications for this department should be sent. Rosters of state association officers and committees and of component county societies and affiliated organizations, are printed in the directories noted under Miscellany, on the front cover index.

CALIFORNIA MEDICAL ASSOCIATION

GEORGE G. REINLE President
CLARENCE G. TOLAND.....President-Elect
EMMA W. POPE.....Secretary-Treasurer

OFFICIAL NOTICES

Riverside, the California Medical Association's 1934 Meeting Place, April 30 to May 3.—The long wagon trains of the West are gone. Gone are the glamorous days of the Indian and the Spanish dons, but romance still lingers in California.

An automobile trip to the southland in the spring-time when the hills are green, the plains blanketed with wild flowers, the orange trees in blossom and every gentle breeze permeated with their perfume, is a most delightful experience.

The wonderful California highways, the beauty and romance of the trip, mark days that are remembered as filled with happiness and content.

The annual meeting of the Association this year offers to its members and their families just such an experience. One may traverse many beautiful portions of this fair land, and arriving at Riverside a spot will be found where man and nature have combined all that is best both in beauty and comfort. Coming to the city's entrance one pauses at the beautiful Mission bridge, the most distinctive structure of its kind in the Southwest, and, after passing the fountain of Saint Francis at the base of Mount Rubidoux, proceeds along the beautiful circle drive to the entrance of Seventh Street. There one can look upon this city which is cradled in a rich valley under a waving canopy of orange and palm trees, presenting a panorama of foliage that is entralling in its beauty and charm.

Happy indeed is a city that can have a hotel that is not a hotel, but an institution, a civic monument. Such is the great modern Mission Inn that rambles lazily over a whole city block in the heart of Riverside. This is indeed "the end of the trail" for our wayfarers, and the three or four days within its portals will be filled with comfort, charm and contentment.

Many hours can be spent viewing the Inn and its treasures, which are both a reflection of the personality of Frank A. Miller, the originator, planner, builder and owner. Both are the consummation of an ideal and the realization of a dream.

Among the Inn's many points of interest can be enumerated the Cloister music room, the Cloister walk or El Camino Real, the Spanish court, the Gallery, the art gallery, baptismal chapel, pontifical court, garden of the bells, the oriental rooms such as the Pagoda room, Fuji-Kan or treasure house, Lodge of the Samurai, and many others. The Spanish and oriental collections are probably the finest in America.

Words fail to describe this famous Inn and the treasures contained in its two and one-half acres of buildings. It must be seen to be appreciated.

In addition to the Inn, Riverside and its environs hold much that is unique and interesting: Mount Rubidoux, Sherman Institute Indian School, March Field United States Aviation Bombing Base, the University of California, graduate and research school of sub-tropical agriculture, the beautiful valley with miles of boulevards tracing their way through thousands of acres of orange and lemon groves. The Victoria golf

course is one of the best in the country, and it will be placed at the disposal of golf enthusiasts. For those who care to range wider afield, Palm Springs, the desert date gardens, Arrowhead Lake, etc., offer many unique pleasures.



Mission Inn

The Riverside County Medical Society invites all members of the California Medical Association and their guests to Riverside and assures all who come a happy unusual experience and unique entertainment features which will dispel any fatigue resultant upon close attendance to the scientific programs.

* * *

Railroad Transportation to Riverside—Annual Session (April 30 to May 3, 1934).—Buy through ticket to Riverside on *Sunset Limited*, Sunday, April 29. If twenty-five or more passengers on the Sunday night *Limited* hold Riverside tickets, special electric trains to Riverside will connect at the Southern Pacific depot in Los Angeles, to take passengers direct to Riverside. The *Sunset Limited* leaves San Francisco at 6:45 p. m. and reaches Los Angeles at 8:15 a. m.

The Lark and Padre arrive too late to permit attendance at the opening of the Monday general session.

Buy your ticket direct to Riverside, via Los Angeles, on *Sunset Limited*. Round trip, \$21.10.

* * *

Microscopic Pathology and the Radiology Diagnostic Conferences.—The same privilege will be extended to members going to Riverside on the *Sunset Limited*, Saturday, April 28, as to those going by the same train on Sunday, April 29.

* * *

Hotel Rates for Annual Session April 30 to May 3, 1934

MISSION INN, CONVENTION HEADQUARTERS

American Plan

Single rooms without bath, \$6 per day.
Single room with bath, \$8 per day.
Double room without bath, \$11 per day.
Double room with bath, \$13 per day.

Other Riverside Hotels*European Plan***Reynolds Hotel—One Hundred Rooms**

- Single rooms without bath, \$1.50.
- Single rooms with bath, \$2.50.
- Double rooms without bath, \$2.50.
- Double rooms with bath, \$3.50.

Tetley Hotel—One Hundred Rooms

- Single rooms without bath, \$1 and \$1.50.
- Single rooms with bath, \$1.50 and \$2.
- Double rooms without bath, \$1.50 and \$2.
- Double rooms with bath, \$2 and \$3.

Plaza Hotel*—Forty-Two Rooms

- Single rooms without bath, \$1.
- Single rooms with bath, \$2 and \$2.50.
- Double rooms without bath, \$1.50.
- Double rooms with bath, \$3.

Potter Hotel—Twenty-Six Rooms

- Single rooms with bath, \$2 and \$2.50.
- Double rooms with bath, \$3 (garage included).

Warrington Hotel—Twenty-Eight Rooms

- Single rooms without bath, \$1.
- Single rooms with bath, \$1.50.
- Double rooms with bath, \$2.50.

Aureau Vista Hotel—Twenty Rooms

- Single rooms with bath, \$1.50 and \$2.50.
- Double rooms with bath (twin beds), \$2 and \$3.50.

Victoria Hotel—Twenty Rooms

- Single rooms without bath, \$1.
- Single rooms with bath, \$2.
- Double rooms without bath, \$2.
- Double rooms with bath, \$2 and \$3.50.

* * *

Committee on Scientific Exhibits.—To stimulate greater interest in the scientific exhibit at the annual session, a special committee has been appointed by the Council: William J. Kerr, M. D., Lyell C. Kinney, M. D., Frederick Leet Reichert, M. D., Ernest M. Hall, M. D., and Elbridge Best, M. D., chairman.

* * *

Scientific Exhibits.—Those who are interested in planning a scientific exhibit at the Riverside meeting should apply for space to the Committee on Scientific Exhibits through the State Association office, room 2004, 450 Sutter Street, San Francisco, before the first of March, 1934.

In making application give title and description of exhibit with an estimated amount of floor and/or wall space required.

* * *

Councilor Appointment.—At the two hundred and twenty-first meeting of the Council, held in San Francisco January 20, 1934, Dr. Harry H. Wilson of Los Angeles was elected a councilor to fill the vacancy caused by the death of Dr. George G. Hunter.

* Connecting rooms with bath, deduct 50 cents from rate of two rooms. Suites available for parties of three and four.

COUNCIL MINUTES

Minutes of the Two Hundred and Twentieth Meeting of the Council of the California Medical Association

The following minutes were approved by the Council at its two hundred and twenty-first meeting, held at San Francisco, January 20, 1934.

Held at the home of Dr. Edward M. Pallette, Los Angeles, California, Saturday, September 30, 1933, at 9:30 a. m.

Present.—Doctors George G. Reinle, president; Clarence G. Toland, president-elect; Edward M. Pallette, Speaker; and Councilors William W. Roblee, Carl R. Howson, Henry J. Ullmann, Fred R. DeLappe, Alfred L. Phillips, Karl L. Schaupp, chairman of the Executive Committee; O. D. Hamlin, Henry S. Rogers, George G. Hunter, C. O. Tanner, Morton R. Gibbons, T. Henshaw Kelly, chairman of the Council; C. A. Dukes, chairman Committee on Public Relations; George H. Kress, editor; Emma W. Pope, secretary; Walter M. Dickie, director; and General Counsel Hartley F. Peart.

Absent.—Doctors C. E. Schoff, William H. Kiger and Junius B. Harris.

1. **Call to Order.**—The meeting was called to order by the chairman, T. Henshaw Kelly.

2. **Minutes of the Council.**—The chairman stated that copies of the minutes of the two hundred and nineteenth meeting of the Council had been mailed to all councilors, and if there were no further discussion he would entertain a motion for their approval.

Action by the Council.—On motion of Gibbons, seconded by Hunter, and unanimously carried, the following resolution was adopted:

Resolved, That the minutes of the two hundred and nineteenth meeting of the Council be approved.

3. **Minutes of the Executive Committee.**—The minutes of the one hundred and thirty-eighth meeting of the Executive Committee were presented. The chairman stated that the important item in these minutes was the program of the Federal Relief Administration for the home care of the unemployed on federal relief and that discussion of this item would be had later in the meeting.

Action by the Council.—On motion of Kress, seconded by Ullmann, and unanimously carried, the following resolution was adopted:

Resolved, That the minutes of the one hundred and thirty-eighth meeting of the Executive Committee be approved.

4. **Financial Statements.**—Financial statements for the months of July and August, 1933, were presented by the secretary and approved by the Council.

5. **Retired Membership.**—Requests for retired membership were presented from San Diego County Medical Society for Frances M. Allen, M. D., and Henry Parker Newman, M. D.; from San Francisco County for Ruth Siebe, M. D.; and from San Joaquin County for William B. March, M. D. Membership data covering each of the requests was presented.

Action by the Council.—On motion of Schaupp, seconded by Gibbons, and unanimously carried, the following resolution was adopted:

Resolved, That retired membership in the California Medical Association be granted Frances M. Allen, M. D., San Diego, and Henry Parker Newman, M. D., San Diego, members of the San Diego County Medical Society; Elizabeth Siebe, M. D., San Francisco, member of the San Francisco County Medical Society, and William B. March, M. D., Burson, member of the San Joaquin County Medical Society.

6. **Humboldt County Medical Society.**—A report on the membership of the Humboldt County Medical Society was submitted by the secretary.

7. **Reinstatement of Members.**—In accordance with Chapter II, Section 2, of the Constitution, the secretary presented a list of members whose memberships

had lapsed on account of failure to pay annual assessments by April 1. Doctor Pope stated that the dues of these members had been forwarded to the State Association by component county secretaries.

Action by the Council.—On motion of Ullmann, seconded by Gibbons, and unanimously carried, the following resolution was adopted:

Resolved, That all members of the California Medical Association who have been reinstated by component county medical societies since April 1, 1933, be reinstated to good standing in the California Medical Association.

8. **Annual Session.**—The secretary stated that the Committee on Scientific Work had met September 10 and decided on the general outline of the program of the annual session and had approved invitations to three guest speakers. The three-day session approved by the Council at the last annual session permitted but three general meetings, two of which would be on medical economics if the president's wish that the first meeting be devoted to that subject be granted and the Committee on Public Relations holds another general meeting on the same topic. It was considered inadvisable to place three guest speakers on the third two-hour general session.

After full discussion the Council reversed its former action and ruled that a four-day session be held as heretofore; that the first general meeting be one on Medical Economics and that the president be empowered to invite one or two speakers; that the general meeting on Tuesday be one on scientific medicine with two guest speakers; that the Committee on Public Relations be given the third general meeting on Wednesday; and that the Thursday morning meeting be made the most interesting meeting of the session and be devoted to a general symposium where an invited guest would speak on a symposium of general interest.

Action by the Council.—On motion of Hunter, seconded by Ullmann, the following resolution was adopted:

Resolved, That invitations to five guest speakers be authorized, provided that two guest speakers on topics of medical economics address the Association.

*9. (See footnote.)

10. **County Institutions Commission.**—Doctor Reinle and Mr. Peart discussed the advantages of a county institutions commission in relation to county hospitals. It was pointed out that Alameda, Sacramento, San Diego and San Bernardino counties now had such commissions and that an effort should be made to establish such commissions in all counties.

Doctor Reinle suggested that a committee outline to all the component county societies the advantages of the establishment of a county institutions commission.

Action by the Council.—On motion of Ullmann, seconded by Kress, and unanimously carried, the following resolution was adopted:

Resolved, That the railway fare and hotel bill of a necessary number of speakers on county institutions commissions be paid by the Association.

11. **Activities of Association.**—Dr. William Roblee suggested that district councilors be instructed to contact their various county societies and give the members talks on "What the Member Gets for His Money," outlining the work of the legal department, the Committee on Public Relations, the Department of Public Relations the financial set-up of the Association, etc.

The secretary was instructed to collect from the Association office, from the chairman of the Committee on Public Relations, from the president, from the chairman of the Committee on Public Policy and Legislation, the Department of Public Relations and the General Counsel information regarding the activi-

ties of these departments and committees and to furnish, prior to November 15, 1933, a digest of same to all councilors. District councilors were instructed to speak before each component county society of their district on "What the Member Gets for His Money."

12. **Publicity.**—The chairman of the Committee on Public Relations gave a brief outline of the plan for releasing publicity through the Associated Press by means of short articles on topics of medical interest to the laity.

13. **Medical Service Plans.**—(a) *Fresno County.*—The general counsel stated that he had been assisting Fresno County Society in the amendment of its Constitution and By-Laws to permit the adoption of a hospital service plan and that the amendments had been adopted and that the Fresno County Society was now awaiting the further development of the Alameda County Medical Society Plan.

(b) *San Diego County.*—The general counsel stated that from letters received it appeared that San Diego County was not at present interested in going ahead with a hospital plan.

(c) *Alameda County.*—The general counsel read a letter from the secretary of the Alameda County Medical Association and delivered duplicate thereof to Doctor Dickie, Director of Public Relations for the Committee on Public Relations.

The letter to the Council was then read by the general counsel and filed with the secretary. The general counsel stated that he had been informed by the secretary of the Alameda County Medical Association that the Council of that component county society was anxious to secure approval of its proposed hospital service plan with related limited diagnostic laboratory, pathological laboratory and roentgenological laboratory medical service; that he had brought with him forms of various papers for discussion.

Discussion was then had of the proposed plan, including that portion of the limited diagnostic medical service providing for the furnishing to the hospital beneficiaries of said diagnostic service, both in and out of the hospital.

Action by the Council.—On motion of Ullmann, seconded by Schaupp, and unanimously carried, the following resolution was adopted:

Resolved, That laboratory service under any hospital service plan (including roentgen diagnostic laboratories and clinical diagnostic laboratories) be confined to hospitalized patients.

Action by the Council.—On motion of Ullmann, seconded by Gibbons, and carried, the following resolution was adopted:

Resolved, That the Council recognizes roentgenologists and other doctors of medicine specializing in pathology and clinical laboratory diagnostic methods as consultants and not technicians.

Action by the Council.—On motion of Ullmann, seconded by Gibbons, and carried, the following resolution was adopted:

Resolved, That the foregoing resolution be published in the JOURNAL.

Doctor Dickie, director of the Department of Public Relations, was then asked whether his committee had passed upon the hospital service plan and the accompanying limited diagnostic service plan of the Alameda County Medical Association. Doctor Dickie advised that the form had not yet been filed with the committee and that no action had therefore as yet been taken.

On the suggestion of the chairman, the action of the Council heretofore taken authorizing the Executive Committee to act in the place and stead of the Council in the matter of consideration and action upon any hospital and medical service plans proposed by any component county medical societies was affirmed.

14. **Corporate Practice of Medicine.**—Doctor Ullmann stated that he believed the Council should clarify the relationship of x-ray and laboratory men in hospitals so that in all cases their practice would conform to the legal requirements regulating the practice of

* Note:—Minute refers to a matter still under consideration by the Council. Publication will be made in due time by Council secretary.

medicine, which prohibits corporate practice. Doctor Ullmann then stated that the roentgenologist is a consultant; that the hospital furnishes the equipment and that it is entitled to a fair return on its investment, rental of space, actual expense involved in janitor service, lighting, etc., and obsolescence of equipment.

Action by the Council.—On motion of Ullmann, seconded by Toland and unanimously carried, the following resolution was adopted:

Whereas, Roentgenologists and other doctors of medicine in charge of roentgen and pathological laboratories are consultants in medicine and not technicians in that they make reports of their interpretations of the results of the examination; and

Whereas, Such reports are as much a part of the practice of medicine as the interpretation of the results of a physical examination; and

Whereas, It is the practice in many hospitals and other institutions to employ roentgenologists and pathologists to render such medical service for which the hospital collects a fee and profits financially thereby; and

Whereas, Such practice of selling or furnishing medical and surgical consultation to hospitals or other corporations is contrary to the laws of the State of California and the principles of the California Medical Association; therefore, be it

Resolved, That the Council of the California Medical Association deprecates such practice and recommends that as soon as practicable, hospitals and other institutions make such arrangements with their attending roentgenologists and pathologists that they shall be in every way on the same financial status as the other members of the staff and that the Department of Public Relations start negotiations to bring this about.

The chairman of the Council requested the secretary to read the resolution adopted by the House of Delegates at the 1933 annual session at Del Monte instructing the Council to take such action as it deems advisable to follow up the ruling of the Blake decision on the corporate practice of medicine.

After discussion in which Mr. Peart and Mr. Morrow were asked for opinion, on motion of Hunter, seconded by Ullmann and unanimously carried, the following resolution was adopted:

Resolved, That the legal department be instructed to prepare and submit a brief on the corporate practice of medicine and the legal remedies applicable, and that the Executive Committee be given power to act.

15. Emergency Relief Program.—The chairman explained the action taken by the Association in relation to the home care of the unemployed on federal emergency relief as embodied in the minutes of the one hundred and thirty-eighth meeting of the Executive Committee. Doctor Kelly stated that the Emergency Relief Administration had now asked for assistance in setting fees for office visits involved in the care of the unemployed on federal emergency relief in communities where no clinics were located and where patients would have to be cared for in the physician's offices.

Action by the Council.—On motion of Kress, seconded by Gibbons, and unanimously carried, the following resolution was adopted:

Resolved, That this matter be referred to the Special Committee appointed at the one hundred and thirty-eighth meeting of the Executive Committee, with power to act.

16. Book List.—The Director of the Department of Public Relations stated that in accordance with the Council's instructions, he had prepared a list of books of medical interest and had circularized the larger libraries of the State and had ascertained that the majority of the books listed were found to be already on the library shelves. It was pointed out that the Committee on Public Relations intended to contact the county societies with a view of inspiring interest in having local libraries place good medical books on their shelves.

17. Membership Campaign.—Following instruction of the Council at its last meeting that the director of the Public Relations Department conduct a membership campaign, the director submitted a chart on a survey made by the department of physicians and surgeons licensed in California, with the exception of Alameda, San Francisco, and Los Angeles counties. Doctor Dickie stated that the present membership of the Association represented approximately 68 per cent of eligible physicians and surgeons in California. Doctor Dickie stated that independent membership campaigns were being carried on in San Francisco, Alameda, and Los Angeles counties and that his survey did not include these counties. He stated that an active membership campaign would be begun after further report on eligible new members.

18. Lay Education on Cancer.—A letter was read from the secretary of the Cancer Commission stating that the Commission felt that the time was ripe for undertaking lay education on cancer by the California Medical Association, through the appointment of local committees in each county society to represent the Cancer Commission in this campaign.

Action by the Council.—On motion of Ullmann, seconded by Schaupp, and unanimously carried, the following resolution was adopted:

Resolved, That the request of the Cancer Commission in re lay education on cancer be granted.

19. Hospital Facilities.—A letter was read from Mr. Ben H. Read, secretary of the Public Health League of California relating to the use of funds of the Emergency Relief Administration in the construction of hospitals.

It was suggested that Mr. Read's railroad fare be paid if work were done in this connection.

Action by the Council.—On motion of DeLappe, seconded by Phillips, and carried, the following resolution was adopted:

Resolved, That the letter be referred to the Executive Committee with power to act.

20. Contributions.—Letters from Lane and Barlow Medical Libraries and the Woman's Auxiliary expressing appreciation of the donations of the Association were read and ordered placed on file.

21. San Joaquin County Society Medical Problems Group.—The report of the Committee on Social Problems of the San Joaquin County Society was presented and the editor stated that a request for publication in the JOURNAL had been received.

It was the sense of the Council that copy of the report be sent to each councilor with a request that he read the report and vote on the desirability of publication in the JOURNAL.

22. Roentgenologists' Code.—It was brought to the attention of the Council that lay laboratories in Los Angeles had proposed a code of laboratories, which had been approved by the director of the Department of Industrial Relations.

Action by the Council.—On motion of Ullmann, duly seconded, and carried, the following resolution was adopted:

Resolved, That the chairman of the Council and the general counsel be directed to assist Mr. Morrow and the Los Angeles County Medical Association in objecting to such proposed code.

23. Date of Council Meeting.—The secretary stated that a meeting of The Trustees Of The California Medical Association would be held at San Francisco on January 20 in accordance with constitutional provision.

Action by the Council.—On motion of Pallette, seconded by DeLappe and unanimously carried, the following resolution was adopted:

Resolved, That the next meeting of the Council be held at San Francisco on Saturday, January 20, 1934.

24. Adjournment.—There being no further business, the meeting adjourned.

T. HENSHAW KELLY, M. D., *Chairman*.
EMMA W. POPE, *Secretary*.

EXECUTIVE COMMITTEE*

Digest of the Minutes of the One Hundred and Thirty-Ninth Meeting of the Executive Committee

1. **Roll Call.**—All members present.
2. **Financial Statements.**—Financial statements for October and November, 1933, presented and approved.
3. **Budget.**—Executive Committee authorized preparation of a budget by Auditing Committee for presentation to Council based on expenses of 1933; such budget to include an allowance for special legal expense and an allocation to the Department of Public Relations to cover its expenses and the contemplated expenses of the Committee on Public Policy and Legislation.
4. **Public Health League of California.**—Letter from secretary of Dental Association read and reply authorized.
5. **Committee on Public Policy and Legislation.**—Information regarding work by committee discussed and allocation for clerical and other expenses allowed chairman.
6. **Advertising in California and Western Medicine.** Secretary presented report showing some improvement in total of advertising in JOURNAL.
7. **Southern California Advertising Agent.**—General counsel authorized to draw contract with certain provisions for submission to Council of California Medical Association and Mr. Adam Guttman.
8. **Annual Session.**—Report by secretary on invited guest speakers. Decision that section meetings be held as formerly on Thursday morning, May 3, 1934.
9. **Amendments to Constitution of Auxiliary.**—Committee of three appointed to review and submit report to Council.
10. **Reprints.**—Request for financial assistance in purchase of reprints of Special Committee Report denied.
11. **Publication of Report of San Joaquin Committee on Social Problems.**—Report submitted to committee for revision and deletion before submission to editor.
12. **Corporate Practice.**—Report by general counsel on problems involved and on action brought by State Bar in Superior Court of Los Angeles against Security First National Bank. Mimeographed copies of complaint authorized sent to councilors.
13. **Compensation Cases.**—Reply of Mr. Morrow to letter of Pasadena physician who questioned legality of care of City of Pasadena compensation patients in City Hospital presented. Letter approved by committee with suggestion that emphasis and reiteration be laid on certain points.
14. **County Hospital Service Plans.**—*Alameda*—Report on approval of mail ballot of Committee on Public Relations and Council on Alameda plans. A few revisions suggested and referred to general counsel for consideration and inclusion.
Santa Clara—Letter from Doctor Schmitt of Santa Clara requesting assistance of legal counsel presented. Resolution passed that Executive Committee cannot consider furnishing legal counsel to any county society until such time as all the requirements for the preliminary steps for the development of such a plan have been complied with.
15. **State Emergency Relief.**—Report by Doctor Kelly on changes in situation since organization of Civil Works Administration. Fuller report authorized sent county societies as soon as Administration furnishes definite information.
16. **Correspondence.**—Letter regarding private practice of physicians in active service in Navy referred to component county society.

17. **Appeal.**—Appeal of R. F. Rohlfing from action of Board of Councilors of Los Angeles County Medical Association set for 11 a. m. January 20, 1934.

18. **Drug Act.**—Recommendation to component county societies that earnest support be given proposed federal and state legislation which aims to prevent mislabeling, misbranding and/or false advertising of drugs, drug products and their therapeutic properties.

19. **Adjournment.**

COMPONENT COUNTY MEDICAL SOCIETIES

CONTRA COSTA COUNTY

Following the custom of several years past, the December meeting of Contra Costa County Medical Society was the annual party.

This year it was a dinner-dance held on the evening of December 16 at the Berkeley Country Club. Effective holiday decorations and soft candlelight made the tables attractive; excellent music by a six-piece orchestra afforded splendid dancing; and the solo and duet dances by a Spanish dance team added to the pleasure of the evening.

Much credit and our thanks are due to Dr. Kaho Daily, who ably arranged a thoroughly delightful party.

In the course of the evening the new officers for the coming year were introduced, with brief remarks, by Dr. L. H. Fraser, the retiring president.

The year 1933 was a very successful one—profitable, pleasant, and progressive. And we wish here to express our thanks to Dr. L. H. Fraser who, as president, served most capably, and to the various committee members who gave most generously of their time and talents.

The attendance was thirty-nine, and the opinion was unanimous that our annual social event was an unqualified success.

* * *

The first regular monthly meeting of the Contra Costa County Medical Society for the new year was held on Tuesday, January 9 at the Hotel Carquinez, Richmond.

The meeting was called to order by Dr. Melvin Stauffer, president, at 8:40 p. m.

The guest speaker of the evening was Dr. Fred H. Kruse of San Francisco, who most ably presented his paper on *Functional Disturbances of the Colon*. It was a subject of real interest, and set an excellent example for the scientific programs for the year.

Several communications were read.

* * *

Resolution on the death of Dr. St. John Hely was read by the secretary, and passed unanimously by the members.

WHEREAS, It has been our misfortune to lose, through death, one of our confrères, Dr. Levi St. John Hely, who was a member of the Contra Costa County Medical Society from 1918 up to and including 1932, and who served the society in the capacity of secretary from midyear 1921 through 1922-1925, and who was president of the society during the years of 1928 and 1929; and

WHEREAS, God, in His infinite wisdom saw fit to remove him from earthly activity on December 19, 1933; now, therefore, be it

Resolved, That the members of the Contra Costa County Medical Society do hereby extend to his beloved wife the full measure of our deep sympathy, and wish it spread upon the records of the society that he be remembered as an honorary member thereof.

* * *

Dr. L. H. Fraser read a letter from the Taxpayers' Association, addressed to Dr. McCullough, relative to the County Hospital activity and investigation. No request was made for action. Doctor Fraser stated that it was read for the sole purpose of keeping members informed of what was occurring along this line.

* For the information of members, digests or summaries of the minutes of the Executive Committee meetings are compiled for publication in CALIFORNIA AND WESTERN MEDICINE.

Doctor Stauffer announced the standing committees for the year 1934.

The following program schedule was announced by Doctor Stauffer:

February at Richmond. Dr. J. B. Spalding, chairman for the evening.

March at Martinez. Dr. H. G. Ford, chairman.

April at Richmond. Dr. S. N. Weil, chairman.

May at Pittsburg. Committee of Doctors Claude Kerns and Selby Marks.

June at Richmond. Dr. H. L. Carpenter, chairman.

July and August, vacation months.

September at Richmond or Antioch. Dr. Fred Nevius, chairman.

October at Crockett. Dr. Christopher Leggo, chairman.

November at Richmond. Annual business meeting.

December, the annual party. Dr. L. H. Fraser, chairman.

The meeting was adjourned at 10:40 p. m., after which the usual buffet supper was served, affording the members another delightful hour for the exchange of pleasantries. CLARA H. SPALDING, *Secretary*.



HUMBOLDT COUNTY

The December meeting of the Humboldt County Medical Society was one of the best and most interesting meetings that has been had.

Through Dr. Purlenky, Dr. A. R. Kilgore, secretary of the Cancer Commission, was invited to bring several speakers to present *A Clinic and Program on Cancer*.

Doctors Kilgore, Dukes, Bolin, and Rodenbaugh arrived in Scotia early Monday morning and were shown through the Pacific Lumber Company by Doctor Cottrell. Driving on to Eureka and arriving at 10 o'clock, the morning was spent in showing pathological slides, x-ray pictures and microscopical specimens. At noon the visitors were guests at the Rotary Club, when Doctor Dukes made a short address.

In the afternoon the following papers were read: *A Neglected But Important Field in Cancer Education* by Charles A. Dukes; *How Much Can a Surgeon Expect from a Pathologist* by Zera E. Bolin; *Diagnosis and Surgery of Breast Cancer* by A. R. Kilgore; and *X-Ray and Radium Treatment of Breast Cancer* by F. H. Rodenbaugh.

A duck dinner was served to thirty-five members, the ducks having been supplied by the president, Dr. Lane Falk.

To show the interest in this meeting, twenty-six out of a membership of thirty-one were present for the entire day. Two came from Crescent city, one hundred miles away; one from Garberville, seventy-five miles; three from Arcata; two from Scotia; two from Fortuna; and the rest from Eureka. Twelve county dentists spent the entire day with us.

The visitors returned to San Francisco on the evening train, feeling well repaid for their efforts. The members were one in giving a vote of thanks for the excellent program put on by the visiting doctors.

LAWRENCE A. WING, *Secretary*.



MONTEREY COUNTY

The regular meeting of the Monterey County Medical Society was held in Salinas at the Court House Annex on January 5. Officers for the new year were installed, and plans made for a professional group dinner and a committee appointed to get in touch with the lawyers and dentists of this county. It was thought that a cordial understanding of each other's problems and a finer feeling could be established by getting better acquainted at these dinners. An interesting discussion was held on the policies for the new year, and plans were laid for an unusually attractive dinner and program to be held at the Hotel Del Monte on the night of February 2.

The following members were present: Doctors A. A. Arehart, H. F. Dormody, H. L. Dormody, R. M. Fortier, W. M. Gratiot, S. W. Hastings, H. S. Hoyt, R. A.

Kocher, W. H. Lawler, J. A. Merrill, Garth Parker, E. W. Reeves, W. R. Reeves, Margaret Swergert, C. Wilson, R. A. Workman, C. Galligan, Jr., J. R. Gray, C. B. Gorham, and E. F. Kehr.

W. H. LAWLER, *Secretary*.



ORANGE COUNTY

The forty-sixth annual banquet and installation of officers of the Orange County Medical Association was held at the Ebell Club in Santa Ana.

During a delicious dinner of roast turkey, music was rendered through sound equipment, and later during the program the Santa Ana Junior College Quartet gave several excellent renditions.

One of the past presidents, Dr. H. Miller Robertson, acted as toastmaster, and Reverend Hydanus gave the invocation. Mrs. C. S. O'Toole, as retiring president of the Woman's Auxiliary, gave an address on the *Medical Auxiliary*. Dr. W. S. Wallace, retiring president of the association, spoke briefly on *Medical Economics*. The invited guest speaker of the evening was Judge LeRoy Dawson of Los Angeles, who related entertainingly many of his war experiences.

The regular installation of officers followed. The officers inducted for the year 1934 were: President, Harry G. Huffman; vice-president, Ralph E. Hawes; secretary-treasurer, Waldo S. Wehrly; councilors, J. M. Burlew (1933-1935), D. R. Ball (1932-1934), F. Harold Gobar (1934-1936).

Eighty-two members and their guests attended the annual dinner. WALDO S. WEHRLY, *Secretary*.



PLACER COUNTY

The Placer County Medical Society held its annual meeting at the Freeman Hotel at Auburn Saturday evening, November 18, 1933. In the absence of the president and vice-president, Past-President Dr. J. Gordon Mackay presided. The meeting was honored by the following visitors: Doctors Charles A. Dukes of Oakland (chairman) and A. R. Kilgore of San Francisco (secretary) of the Cancer Commission of the California Medical Association, C. E. Schoff and Frank Scatena of Sacramento, Ira A. Wheeler of Colfax, and H. N. March of Grass Valley.

This being the annual meeting, election of officers was held, and the following were elected: President, L. B. Barnes of Newcastle; vice-president, Louis E. Jones of Roseville; secretary-treasurer, Robert A. Peers of Colfax. Delegate to the 1934 meeting, W. M. Miller of Auburn. Alternate, Robert A. Peers of Colfax.

The reports of the secretary-treasurer were read and, on motion duly made and seconded, were accepted.

The following correspondence was read:

A letter from Dr. A. R. Kilgore, secretary of the Cancer Commission of the California Medical Association, regarding public education relative to cancer and suggesting the formation of a committee.

A letter from Doctor Hibben relative to special committee on physical therapy of the California Medical Association.

A letter from Dr. Walter M. Dickie, director of the Department of Public Relations of the California Medical Association, suggesting formation of a committee to supervise the placing of medical books on the shelves of our public libraries.

Dr. Walter W. Reed of Nevada City was elected to membership.

The acting president called on Dr. C. E. Schoff, councilor of the eighth district, and Doctor Schoff made a short address.

Doctor Dukes then addressed the society upon *Relief for the Cancer Derelict*. He first outlined briefly the organization and work of the Alameda County Cancer Commission at the Highland Hospital, which has been conducted for the past three years. He stressed the advantage of such a clinic where the patient can have the advantage of the experience and services of the

radiologist, the surgeon, the internist, and the specialist. Doctor Dukes outlined the method of care of advanced cases of malignancy. He discussed also the change in attitude toward cancer by patients suffering from various types of this disease and explained how this attitude would continue to change as the profession and the public are educated regarding cancer, its early symptoms, and its curability when recognized early and properly treated. Doctor Dukes presented a great number of extremely interesting lantern slides, showing the results of treatment in advanced cases of carcinoma. The good results obtained by treatment in the production of cures and of relief of symptoms were very clearly shown.

Following Dr. Dukes' address, Dr. A. R. Kilgore gave an address on *Cancer—Diagnosis and Treatment*. Doctor Kilgore first reviewed briefly the plan of the organization and purpose of the California Cancer Commission and showed clearly that the Cancer Commission studies so far have not only materially clarified our ideas of proper early treatment, bringing about closer agreement between surgeons, radiologists and other specialists, but have brought sharply to attention important points in cancer treatment still unsettled by the experience of the world. To illustrate, he discussed the report of the Committee on Breast Tumors:

1. Diagnosis: All agree that an accidentally discovered painless lump is the most common onset symptom. The significance of bleeding from the nipple is not so generally agreed upon, but is accepted by most men as at least a sign of a precancerous papilloma and sometimes of cancer.

2. Exploration: It was agreed that every single definite breast lump in adult life should be explored, regardless of clinical diagnosis; that determination of the presence of a lump is sufficient and examination should not be prolonged on account of the danger of increasing metastasis.

3. Exploration of lumps should not be undertaken without preparation for immediate diagnosis, including frozen section facilities, since delay of radical operation after removal of the lump materially reduces the chances of cure.

4. Minimum extent of the radical operation includes breast, overlying skin, both pectorals, axillary gland-bearing fat, and the deep fascia from clavicle to abdominal rectus and sternum to latissimus in one piece.

5. The radiotherapy problem is not yet settled. X-ray cannot replace operation, but the trend of opinion is to regard it as offering improvement of operation results. Preoperative treatment is regarded at present as of more value than postoperative. All agree that the optimum time between treatment and operation is still unknown.

The discussion was opened by Doctor Schoff and Doctor Scatena of Sacramento. A general discussion by Doctors Atkinson, Dunievitz, Peers, Mackay, Lewis, Barnes, and Briner followed. The discussion was closed by Doctors Kilgore and Dukes.

The secretary reminded the members that dues for 1934 could now be paid at any time.

ROBERT A. PEERS, *Secretary*.

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SAN BERNARDINO COUNTY

The meeting of the San Bernardino County Medical Society, held at the County Charity Hospital in San Bernardino on Tuesday, January 2, was called to order by the president at 8 p. m.

The application of Dr. Charles Clock was read and approved.

The following resolution was read by the secretary:

RESOLVED, That the Executive Committee of the California Medical Association recommends to the component county societies that earnest support be given to proposed federal and state legislation which aims to prevent the mislabeling, misbranding and/or false advertising of drugs and drug products and their therapeutic properties.

The following letter was read by the secretary before being forwarded:

Mr. Edward Macauley,
Engineer, Civil Works Administration,
Fox Building,
San Bernardino, California.

Dear Mr. Macauley: The Council of the San Bernardino County Medical Society, acting for the San Bernardino County Medical Society, protest against the plan to treat employees injured on the CWA project by contract to individual physicians.

The injured should be at liberty to be treated by their own physicians.

If the Administration wishes to have the injured treated by a group which is under control and subject to discipline, members of the County Medical Society form such a group.

Very sincerely yours,

(Signed) Dr. E. J. Eyttinge,
Secretary.

The superintendent of the County Charity Hospital spoke briefly of the ambulance situation.

Dr. C. G. Hilliard, chairman of the Committee on Public Relations, summarized the proposed means of caring medically for the unemployed and transients.

A motion was made by Doctor Hilliard, and seconded by Doctor Moor, that the president appoint a suitable committee of physicians, representing all sections of the county, who shall act as advisory committee to the lay committee charged with the administration of such care. That the secretary be directed to send every member all necessary information regarding the proposed plan for medical care of the unemployed and shall give each member an opportunity to state whether or not he wishes to engage in this work.

A second motion was made by Doctor Hilliard, and seconded by Doctor Evans, that application for full-time position of visiting medical officer for transient camps be submitted to the secretary, to be in turn submitted to Mr. Maxwell, who is in charge of this branch.

The physicians engaging in this work will care for camp cases chiefly in more distant camps. Those cases in camps easily available to adjacent physicians and such cases as require hospitalization or other care which cannot be given in camp will be referred to the nearest available private hospital and to the physician on the same panel as care for the unemployed.

Doctor Hilliard then read the decision from the State Committee on Public Relations regarding medical service corporations, which is as follows:

"Principle three of the principles adopted by the Council of the California Medical Association states that sole control of any organization for medical service must be limited to the members of the profession."

The program of the evening was then entered upon. Dr. K. L. Dole, chief of the Orthopedic Section of the County Charity Hospital, presented three groups of cases: fractures, osteomyelitis, and poliomyelitis. Discussion after each group was led by Doctor Babcock. In the absence of Doctor Taylor, Doctor Babcock with Doctor Trick presented a paper entitled *Orthopedics as Applied to General Practice*. Illustrated with motion pictures. Discussion was opened by Dr. F. E. Clough.

E. J. EYTINGE, *Secretary*.

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SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held on November 13 in the Bissell Auditorium of the Cottage Hospital. In the absence of President Geyman, Vice-president Markthaler presided.

The speaker of the evening was Dr. A. Moody, pathologist from St. Francis Hospital, San Francisco, who gave an extremely interesting and instructive paper on the *Leukemias and Related Blood Disorders*, with particular reference to the embryology of blood, illustrating his talk with a series of lantern slides.

The paper was discussed by Doctors Evans, Koefer, Pierce, Stevens, Ullmann, Clark, and Koehler.

The society then went into executive session.

Doctor Henderson reported for the Public Relations Committee as follows:

"Some dissatisfaction having been expressed by members of the County Medical Society in regard to the well-baby clinics held by the Visiting Nurse Association in that some of the patients were not confined to the indigent class, the Visiting Nurse Association agreed to submit a letter to the parents recommending that they see their attending physician. If he desired to continue on the case at a satisfactory fee, or referred the patient to some other physician at a satisfactory fee, the Visiting Nurse Association would not continue on the case. If the doctor indicated that he wanted to have no further connection with the case, the Visiting Nurse Association would then see that the patient was taken care of at its clinic."

After discussion by Doctors d'Alessio, Bakewell, and Freidell, it was moved by Bakewell, and seconded by Means, that the county society endorse the method proposed by the Visiting Nurse Association.

Doctor McNamara then discussed certain phases of the income tax, and was informed by Acting President Markthaler that this whole subject was being investigated by the American Medical Association.

Doctor Gray then reported for the Board of Censors regarding the amendment to the constitution, and it was moved, seconded and carried, that his committee prepare an amendment to the by-laws, to be ready at the December meeting.

* * *

The regular meeting of the Santa Barbara County Medical Society was held on Monday, December 18, 1933, at the Bissell Auditorium of the Cottage Hospital, with President Milton J. Geyman presiding.

Dr. John C. Ruddock of Los Angeles gave a talk on *Peritoneoscopy and Mitral Disease*, illustrated with lantern slides. This paper was extremely interesting, as Doctor Ruddock is opening an entirely new field in diagnostic methods. He was highly complimented by the membership for his pioneer work. The paper was discussed by Dr. Clarence Toland, president-elect of the California Medical Association, and Dr. John Darrell of Los Angeles and Doctors Robinson, Ullmann, Brown and Pierce of Santa Barbara.

The president then introduced Doctor Remmen of Glendale, president of the Public Health League, who gave a short résumé of the activities of the League. Further discussion of the League was entered into by Doctor Glenn Myers of Los Angeles and Mr. Ben Reed, secretary of the Public Health League of California. They brought out many of the activities of the League and emphasized the necessity for the doctors banding themselves together for their own mutual protection.

Then followed a general discussion, and it was moved by Doctor Ullmann, and seconded and unanimously carried, that the president appoint a committee for a Public Health League membership drive.

A communication from the Parent-Teacher Association was read regarding typhoid inoculations, and after discussion it was moved, seconded and carried, that the publicity committee give out the following statement: "That typhoid inoculations will be given gratuitously by the Health Department to all indigents certified by any welfare organization, including the Parent-Teacher Association. All others should get in touch with their family physician, who will give these inoculations at a price satisfactory to the patient."

A communication from the Santa Barbara Chamber of Commerce was read asking for a donation toward a float in the tournament of roses at Pasadena, and it was moved, seconded and carried, that the secretary-treasurer forward a check for \$10.

The president announced that the Program Committee would take care of the annual meeting.

* * *

The annual dinner meeting of the Santa Barbara County Medical Society was held at El Paso on January 8. There were present at the banquet seventy-three doctors and eight members of the laity.

The usual program was reversed in that the business session was held immediately preceding the banquet.

It was moved, seconded, and unanimously carried, that Dr. L. R. Ryan be elected an honorary member of the society.

Ballots were then distributed for the election of officers. There were sixty-five ballots cast, and the following were elected officers for the ensuing year: President, E. L. Markthaler; vice-president, John Van Paing; vice-presidents-at-large, Jules Bertero and M. J. Duncan; secretary, W. H. Eaton. Delegates to State Society (two years), H. Freidell and R. Evans. Alternates to State Society, W. E. Johnson and E. J. Lamb. Council of Santa Barbara County Medical Society, O. C. Jones, E. K. Shelton, H. L. Schurmeier, H. E. Henderson, and E. L. Markthaler.

During the interval between counting of the ballots and the beginning of the banquet, refreshments were served which were greatly enjoyed by all. The banquet was called to order by President Geyman, who announced the result of the election and introduced President-elect Markthaler.

Doctor Markthaler called upon Doctor Henderson, chairman of the Public Relations Committee, for his report. It was then moved, seconded and unanimously carried, that the report be adopted.

Doctor Johnson then moved, and it was seconded and unanimously carried, that the following resolution be adopted and that each member attach his signature thereto:

"In accordance with the recommendations of the Public Relations Committee accepted by the Santa Barbara County Medical Society in regular session January 8, 1934, to the effect that on and after March 1, 1934, all free dispensary service furnished by members of said county medical society shall cease until adequate and satisfactory arrangements can be made between the County Board of Supervisors and the medical society, we, the undersigned, do hereby pledge ourselves to abide by this resolution." For report of committee, see below.

Dr. Markthaler then introduced Dr. Irving Wills as toastmaster, who called upon the following for remarks: Assemblyman Bliss of Carpinteria, Senator Duval of Ventura, Senator Stow of Santa Barbara, Assemblyman McBride of Ventura, Supervisor Stevens, Mayor Nielson, and Thomas Storke, editor of the Santa Barbara *Daily News*. These speakers brought out the fact that the medical profession do not take sufficient interest in the passage of the various laws which affect their profession. The speakers were all insistent that the medical profession should let the legislatures know of their desires and what laws should be passed to benefit progressive medicine.

Doctor Wills then introduced Superior Judge Atwell Westwick, who gave an extremely interesting and comprehensive discourse on *The Doctor in Court*. He dwelt especially on criminals and their treatment and the lack of interest on the part of the medical profession in their treatment, emphasizing the fact that they should be considered mentally sick and treated so that they might at least become partly self-supporting, rather than confined in jails and penitentiaries at the public expense. WILLIAM H. EATON, *Secretary*.

* * *

Report.—For fifteen months the Public Relations Committee has been working on the subject of a centralized dispensary. After a thorough study and investigation a plan was worked out which has previously been reported in detail to the society and accepted by them. This plan correlated the activities of the two private hospitals, the City Health Department, the Welfare Department, the Visiting Nurse Association, and the medical society.

At a recent meeting which the committee held with the County Board of Supervisors, the Mayor and the Council of Santa Barbara, the plan was explained to them in detail and after considerable discussion was rejected as impractical by the chairman of the board. His idea of caring for the ambulatory indigents is to contract with a small group of physicians who will

do all of the dispensary work for a small compensation. This same group would also be the staff of the General Hospital. There would be no rotation of service and each individual would continue in the work as long as both parties to the contract were satisfied.

From the medical standpoint, of course this idea seems to offer as little hope of success as any which has so far been presented. The fact remains that after fifteen months of continuous effort to do something constructive in regard to the dispensary work in Santa Barbara, the situation remains unchanged.

The St. Francis Hospital has closed its dispensary because of lack of funds. The Cottage Hospital is staggering under an ever-increasing load of dispensary work. The suggestions of the medical society to anticipate this situation has received no support.

It is, therefore, the recommendation of the Public Relations Committee that on and after the first day of March, 1934, free services in the city of Santa Barbara, furnished by members of this society, shall cease unless adequate and satisfactory arrangements can be made with the Board of Supervisors.

(Signed) PUBLIC RELATIONS COMMITTEE.



SOLANO COUNTY

The members of the Solano County Medical Society, in conjunction with the Napa County Medical Society, held their regular monthly meeting on January 10 at 8 p.m. in the Hotel Casa de Vallejo. The meeting was preceded by a dinner, at which about forty members and guests were present.

Following the dinner, addresses were given on topics relative to the general interests of the California Medical Association by the following speakers: Dr. George G. Reinle of Oakland, president of the California Medical Association; Dr. W. Black, superintendent of the Highland Hospital in Oakland; Doctors Dukes and Walter Dickie of Berkeley. The addresses were well received and an interesting discussion of the papers by the various members of the society followed.

Special guests at the meeting were: Dr. G. Stice, superintendent of Napa State Hospital, and Dr. F. O. Butler, superintendent of the Sonoma State Home at Eldridge.

The newly elected officers of the Solano County Medical Society for 1934 are: President, John W. Green of Vallejo; vice-president, Cary Snoddy of Vallejo; secretary-treasurer, A. J. Ryan of Vallejo. Delegate to the state convention, P. B. Fry of Benicia. Alternate, Cary Snoddy of Vallejo.

The next regular meeting of the Solano County Medical Society will be held at the Hotel Casa de Vallejo on Wednesday evening, February 14, at which time a symposium on *Obstetrics* will be held.

AMBROSE J. RYAN, *Secretary*.



VENTURA COUNTY

The November meeting of the Ventura County Medical Society was held in the clinic building of the Ventura County Hospital on the 14th. The meeting was called to order at 8 p. m. by Doctor Hendricks.

Members present were: Doctors Little, Illick, Shore, Hendricks, W. S. Clark, Charles Smolt, Homer, D. G. Clark, Coffey, Armitstead, Jones, and Felberbaum.

Guests present were: Doctors Ullmann, Cody, Gronhoyd, Barker, Bradford, Reedie, and Kraushaar.

A letter from Doctor Dickie was presented suggesting a committee on education to contact librarians of various communities in regard to medical books on the library shelves.

Doctors Smolt and Shore were appointed on Education Committee.

A letter from the Aetna Life Insurance Company regarding group protective insurance was read and tabled.

Following consideration of the above communications, films on human cancer, cancer research and tissue culture were shown.

The December meeting of the Ventura County Medical Society was held in the clinic building of the Ventura County Hospital on the 12th. The meeting was called to order at 8 p. m. by Dr. F. Royal Hendricks.

In addition to the members and speakers for the evening there were about twenty guests present. Members present were: Doctors Lillian Smolt, Drace, Achenbach, D. G. Clark, Rich, Armitstead, Hendricks, Coffey, Shore, Illick, Charles Smolt, W. S. Clark, Homer, and Felberbaum.

Doctor Coffey, who was program chairman for the evening, introduced Doctor Remmen, president of the Public Health League of California. Doctors Remmen, Toland, Myers, Hales and Daniel, and Mr. Ben Read, all members of the Public Health League, talked on the benefits and plans of the Public Health League. Doctor Remmen also gave a talk on the San Fernando plan, and Doctor Myers gave a talk on the San Diego plan.

A letter from the California Medical Association regarding the emergency relief work was read and discussed. The following committee was appointed to draw plans for emergency relief: Doctors Drace, D. G. Clark, Osborn, W. S. Clark, and Rey.

The following officers were elected for 1934: President, Charles Smolt of Ventura; vice-president, D. G. Clark of Santa Paula; secretary-treasurer, Fred A. Shore of Ventura; delegate, W. S. Clark of Ventura; alternate, Fred A. Shore of Ventura.

WILLIAM FELBERBAUM, *Secretary-Treasurer*.

CHANGES IN MEMBERSHIP

New Members (12)

Alameda County.—H. C. Aitken, H. C. Crockett, Richard Heinz.

Los Angeles County.—Frank Porter Miller.

Placer County.—Walker W. Reed.

San Diego.—M. B. Graybill, F. G. Lindemulder.

San Francisco.—Beverly Simpson.

San Joaquin.—P. F. Dieffenbacher, B. W. Knopf.

Santa Barbara.—Edwin R. Kluss.

Santa Cruz.—Reginald S. Rood.

Transferred (1)

H. A. Huenergardt, from Orange County to Alameda County.

In Memoriam

Crummer, Leroy. Died January 2, 1934, age 62. Graduate of Northwestern University Medical School, 1896. Licensed in California in 1929. Doctor Crummer was an honorary member of the Los Angeles County Medical Association, a former member of the California Medical Association, and a Fellow of the American Medical Association.



Hely, Levi St. John. Died December 19, 1933, age 64. Graduate of the University of Michigan Medical School, Ann Arbor, 1899. Licensed in California in 1901. Doctor Hely was a member of the Contra Costa County Medical Society, the California Medical Association, and the American Medical Association.



Look, Halleck Hart. Died December 26, 1933, age 72. Graduate of the Columbia University College of Physicians and Surgeons, New York, 1887. Licensed in California in 1890. Doctor Look was a member of the Sacramento County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

OBITUARY



Jule B. Frankenheimer
1873-1934

Dr. Jule Frankenheimer had no doubts, no fears. He needed no preparation for death. He had so lived that, when his call came, he was ready to meet his God.

Born in Stockton in 1873, Dr. Jule Frankenheimer was 59 years old when seized with a sudden terminal heart attack; there was no suffering; they found him on the floor of his room at the Club in the early morning.

Doctor Frankenheimer had made his wishes known to the kindly manager of the Argonaut Club: "No flowers, no funeral, cremation on the same day of my death." The wishes of the doctor were carried out. Curiously, they conformed to the old Talmudic Law of burial before sundown on the day of death.

Dr. Jule Frankenheimer leaves a fine record, first, in the schools of Stockton in his youth, next in Stanford University where he was graduated in the class of '96 in his young manhood, in Cooper Medical College where he obtained his degree in medicine, next as intern for one year in the City and County Hospital of San Francisco, and later in Germany at Heidelberg where he went in 1911 for a year's study. He enlisted immediately on our entry in the Great War in 1917, in the Medical Department. He served overseas and was discharged in 1919 as Major of the United States Medical Corps.

On his return to San Francisco, he resumed the practice of medicine. Starting with a leaning toward surgery, it was at this period he became more interested in internal medicine and lost interest in surgery. Diagnosis became his greatest interest. Latterly he reacted strongly against the too great mechanization of diagnosis. He believed that clinical findings were given too little weight. He won an honorable and distinguished place as a clinical diagnostician.

Dr. Jule Frankenheimer's fine sense of honor, his justice in his dealings, won him universal admiration and respect. From 1905 to 1920 he held the position of directing physician and instructor in Cooper Medical College.

Dr. Jule Frankenheimer made friends and kept them through the years. A Stockton boy, Billy Harrelson, a schoolmate of bygone years, was his friend at Stanford. They played together on the '95 Pioneer Class football team under Walter Camp. Numbered among his many friends and colleagues were: Ex-President Herbert Hoover, Herbert Fleishhacker, Ray Lyman Wilbur, president of Stanford University; Joseph L. Greenebaum, Dr. Houston, Dr. Morrow, Dr. Morton Gibbons, Dr. Annie G. Lyle, and Dr. Miller, who attended him.

Dr. Jule Frankenheimer leaves two brothers, living in Stockton, Messrs. L. H. Frankenheimer and Sam Frankenheimer.

In 1931 President Herbert Hoover issued an invitation to his old Stanford colleagues on the '95 football team, of which Hoover was manager, to visit him in Washington for a "Huddle" dinner and breakfast. With one exception, every one of the team was present. The reunion of these men, who had become notable in the different walks of life, was a great joy which they expressed eloquently at a subsequent banquet given them by an old colleague of their class who happened to be in Washington at that time.

Dr. Jule Frankenheimer felt that the practice of medicine was an ancient and honorable calling. He maintained throughout his whole professional career the highest standards. His code of ethics was of the highest. When toward the end he was dragging himself to practice, suffering almost constant unbearable pain, he could not be persuaded to abandon his post. Finally, when pressed, he said, "What would some of my patients who are old and cannot pay do without me?"

Dr. Jule Frankenheimer, honorable in all his dealings, punctilious in the payment of his obligations, owed nobody. His friends and his colleagues owe him great respect, which this article aims to pay him.

ANNIE G. LYLE, M. D.

C. M. A. DEPARTMENT OF PUBLIC RELATIONS*

Medical Bureau and Health Association Service of Pacific Northwest†

The main purpose of the investigations of the Committee on the Costs of Medical Care was to determine upon some method of caring for sickness of the low-wage earners who have been notoriously the most neglected in case of illness. Their solution of the problem was a modification of hospital insurance. Recently Dr. C. R. Roren, assistant director of the medical service of Jules Rosenwald Foundation, has appeared before medical societies of the Pacific Northwest for the purpose of elaborating this hospital insurance plan and explaining its proposed administration in accordance with the purposes of the committee. In brief, this plan centers in a hospital which makes contracts with the employers or the people themselves for the hospitalization of their sick and disabled employees, provides drugs and all necessary equipment and care of the patients. Medical services are rendered by physicians apart from the hospital contracts. Ostensibly the patients have free choice of physicians. This selection, however, would rapidly become confined to the group of medical attendants aligned with the particular hospital.

The chief criticism of this plan is that the set-up is controlled by laymen. With few exceptions hospitals are governed by boards entirely or largely composed of laymen, sometimes supplemented by a few physicians. Hence the situation may readily develop that supervision of the patients will not be assuredly under the care of the medical attendants. Nor can there be a certainty of the really free choice of physicians by the patients. One can readily visualize a situation where the lay management may favor certain ones of the medical group over others, thus vitiating the alleged free choice.

In contrast to this plan, that adopted by the profession in Washington and Oregon deserves careful consideration, the medical service bureau in the former and health association in the latter. The basic principles adopted and already in practice in the two states are the same, though the details differ in some re-

* An open forum for progress notes on the department's activities and for brief discussions on medical economics. Correspondence and suggestions invited. Address Walter M. Dickie, Room 2039, Four Fifty Sutter Street, San Francisco. This column is conducted by the Director of the Department.

† Reprinted from *Northwest Medicine*, December, 1933.

spects. Illustrating the advantages of this plan over that of hospital insurance, attention is directed to its execution now being carried on in Washington, while a similar illustration can be presented from Oregon. This displays a procedure to care for the employees with small incomes which in all its aspects is entirely under the control of the medical profession. In a given county the whole set-up is under supervision of the medical society, the physicians caring for the patients coming only from its members. The laymen who carry out the details relative to making the contracts with employers, collecting fees and paying bills, are in the employ of the medical bureau of the given medical society and the permanence of their employment is at the discretion of the physicians who engage them. The selection of hospitals for the care of the patients, the purchase of drugs, the employment of specialists and special lines of treatment, are all under the control of the physicians themselves.

Details for carrying out the necessary measures have been determined through very careful study and with attention to all available information. As time goes on, errors which may arise will be corrected with a purpose of giving careful and satisfactory attention to the sick who are under treatment. The essential feature of free choice of physicians is offered the patients in a manner which is more liberal than that of the hospital plan with a group attached to each hospital. He has a selection from any member who belongs to the bureau, under no restrictions from outside influences. Recognizing that all physicians have not equal qualifications, the bureau has a medical director with power of selection, who may supervise questionable treatment and the choice of attendants. Since the success of this plan depends upon its careful management by the physicians themselves, it is believed that its actions will be administered with much more detailed supervision than could be possible under a plan such as that presented by the committee where its success depends upon a hospital under the direction of laymen who are not personally and directly connected with the care of the patients. Under the committee plan the hospital is made the basic factor or predominant phase of the several integral parts which go to make up "medical care." Under the bureau plan the physician is the predominating factor, and the medical profession believes this is preferable. The differences between these two plans are so vital, so far as the medical profession is concerned, that the contrasting features are well worthy of careful study.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION*

Component County Auxiliaries

Los Angeles County.—The annual meeting of the Woman's Auxiliary to the Los Angeles County Medical Association was held on Tuesday, December 19, in the Ebell Club banquet hall.

Luncheon was followed by a business meeting and election of officers.

A very interesting talk was given on *Neglected Responsibilities* by Dr. Paul Popenoe, general director of the Institute of Family Relations.

The spirit of Christmas was felt in the reading of "On a Christmas Morning," by Mrs. Charles W. Roadman.

* As county auxiliaries to the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Thomas J. Clark, chairman of the Publicity and Publications Committee, 40 Ross Circle, Oakland. Brief reports of county auxiliary meetings will be welcomed by Mrs. Clark and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate one page in every issue for Woman's Auxiliary notes.

The first board meeting in 1934 of the Woman's Auxiliary to the Los Angeles County Medical Association took place Thursday, January 4, 10 a. m., at the home of the president, Mrs. John V. Barrow.

The new board for the ensuing year was seated as follows: President, Mrs. John V. Barrow; first vice-president, Mrs. Charles E. Futch; second vice-president, Mrs. Alvia Brockway; recording secretary, Mrs. Clifford Walker; treasurer, Mrs. Hans E. Schiffbauer; directors, Mesdames Mark Glaser, Carl R. Howson, William O. Leach, Edward M. Palette, William A. Swim, Russell Todd Uhls.

The members were all present, with the exception of Mrs. Russell Todd Uhls and Mrs. William O. Leach.

It was decided that the president's tea would be held on January 30, from 2:30 to 5 p. m. at the home of our president, Mrs. John V. Barrow, 142 South Windsor Boulevard, Los Angeles. Members of the board, Mesdames Charles E. Futch, Alvia Brockway, Clifford Walker, and Hans E. Schiffbauer, will be assistant hostesses. Mrs. Fred B. Clark will favor those present with vocal selections, and Mildred Schwuchow, with selections on the harp.

The board will soon announce for the coming year an active program of interesting speakers and social events which will further the interest of the Auxiliary and the Medical Association.

(Mrs.) CHARLES E. FUTCH,
First Vice-President.

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Mendocino County.—The Woman's Auxiliary to the Mendocino County Medical Society held its meeting on December 7 at Talmage. The county medical society held its meeting on the same evening, and both organizations were the guests of Dr. and Mrs. Ruggles A. Cushman at dinner. Following dinner the auxiliary held its business meeting and the installation of the officers for the next year. President, Mrs. Robert E. Gleason of Philo; president-elect, Mrs. H. H. Wolfe of Fort Bragg; secretary-treasurer, Mrs. Rudolph Toller of Talmage.

Mrs. Henry Rogers, wife of the district councilor, was a guest of the auxiliary. A joint meeting with the physicians was held after the business meeting, the program being a discussion of early Mendocino County medical history. Mrs. Gleason led the discussion.

The auxiliary has a membership of fourteen, and nine were present.

1 1 1

Orange County.—The home of Dr. and Mrs. John Wehrly was the meeting place of the December meeting of the Woman's Auxiliary to the Orange County Medical Association on the afternoon of December 5. The meeting was called to order by the president, Mrs. C. S. O'Toole.

Unanimous thanks were bestowed upon Mrs. F. E. Coulter and Mrs. H. A. Johnston for the success of the musicale and tea given last month in the Johnston home. Both Mrs. Coulter and Mrs. Johnston responded in their usual gracious manner.

Mrs. Hiram Currey read the report of the *Hygeia* Committee as follows:

"Quota set for Orange County by national *Hygeia* Committee was five. Our *Hygeia* Committee sent in sixteen subscriptions, seven of which were gifts from the auxiliary to branch libraries in the county.

"Two hundred and thirteen letters to the Parent-Teacher Association, dentists, and doctors in the county were mailed, but only five new subscriptions were received. The committee recommended the following suggestions for the coming year:

"1. Reach the goal of five subscriptions set for Orange County again this year.

"2. Send representative to the Medical Association meeting to obtain subscriptions and renewals.

"3. Secure as many members as possible to be subscribers.

"4. Be boosters of this excellent periodical, *Hygeia*."

"Election of new officers to carry on the work of the organization for the coming year followed. Mrs. J. I. Clark read the report of the Nominating Committee as follows: President, Mrs. Harry Huffman; president-elect, Mrs. F. L. Chapline; vice-president, Mrs. D. C. Cowles; secretary, Mrs. K. H. Sutherland; treasurer, Mrs. Paul Seelinger."

The report was unanimously accepted.

Welcomed as special guests of the afternoon were: Mrs. Charles Howard and Mrs. W. H. Newman of San Diego County, and Mrs. J. S. Brastad of Anaheim, who as speaker of the afternoon gave an interesting review of "The House of Exile" by Nora Wain. The book was described as an intimate story of the life of a Chinese family of the better class.

The octet of the Junior College Glee Club favored with two lovely numbers, "Sweetest Flower that Grows" and "O Holy Night."

A message from Mrs. O'Toole and the introduction of the new officers closed the meeting.

The guests were then invited to partake of tea in the dining room, presided over by Mrs. F. E. Coulter and Mrs. O'Toole. Hostesses with Mrs. Wehrly were: Mesdames Harry Huffman, Milo Tedstrom, J. I. Clark, and C. S. O'Toole.

YULA S. MOORE, *Secretary*.

Riverside County.—Mrs. A. W. Walker was reelected president of the Woman's Auxiliary to the Riverside County Medical Society Monday evening at the annual meeting of the society held at the home of Mrs. H. J. Wickman on Orange Street.

Other officers elected were: First vice-president, Mrs. W. W. Roblee; second vice-president, Mrs. J. N. Roe; secretary, Mrs. Arthur Miller; corresponding secretary, Mrs. Wickman; treasurer, Mrs. C. R. Geith; directors, Mesdames G. Wayland Coon, H. E. Felps, C. Van Zwahlenburg, Bon O. Adams, W. Edwin Gardner, and Paul Thuresson.

Mrs. Walker announced committee chairmen as follows: Mrs. Erwin P. Miller, Membership; Mrs. T. A. Card, Program; Mrs. C. Van Zwahlenburg, Hospitality; Mrs. Paul Thuresson, Hostess; Mrs. Berryman Green, Decorations; Mrs. Ray McCarty, Publicity; Mrs. Ralph Smith, Telephone; Mrs. W. W. Roblee, Current Events; Mrs. Hervey S. Faris, Nominating.

The next regular meeting of the auxiliary will be a social meeting, with cards, to be held at the Community Hospital on January 8.

At the close of the evening, refreshments were served by the hostesses: Mesdames Wickman, Card, Adams, and Walker.

Sacramento County.—The regular meeting of the Woman's Auxiliary to the Sacramento Society for Medical Improvement was held at the home of the president, Mrs. F. N. Scatena, 1400 Forty-first Street, Tuesday, December 19, 1933. New officers, named by the Nominating Committee at the previous meeting, were voted upon and elected unanimously as follows: President, Mrs. Howard Hall; first vice-president, Mrs. Burt Howard; second vice-president, Mrs. Harry Kanner; recording secretary, Mrs. E. O. Brown; corresponding secretary, Mrs. F. P. Brendel; treasurer, Mrs. T. Binkley; directors, Mesdames A. K. Dunlap, Lillian Arthur, Paul Frame, E. T. Rulison, Russel Harris, and Lorenz Ruddy.

All other business and reports were postponed for the next meeting so that a social evening could be observed.

Each guest brought a "white elephant" gift, which was placed in a large basket inside the front door for later distribution to the guests.

Cards claimed the attention of all the guests. Mrs. Herman Lehne's singing, accompanied by Mrs. John Lagomarsino, gave entertainment while the games were in progress. Miss Nancy Jane Pearson read original poems and played selections on the accordion. Mrs. Grace Pearce read a Christmas poem.

After the program and card games the guests sang Christmas carols and songs, while the hostess, assisted by the officers of the year, served refreshments.

(Mrs.) F. P. BRENDL,
Corresponding Secretary.

San Diego County.—The San Diego auxiliary held its regular monthly meeting on December 12. Following a Christmas luncheon, annual reports of committees, and election of officers, the members adjourned to Vau Clain Home, the tuberculosis department of the County Hospital. There they visited the children's wards, were entertained by the children in a program in their schoolroom, and left a bag of candy for each child's supper tray as a Christmas remembrance.

The meeting was well attended, and interesting plans are being made for the work of next year.

NEVADA STATE MEDICAL ASSOCIATION

D. A. SMITH, Mina	President
E. E. HAMER, Carson City	President-Elect
J. N. VAN METER, Las Vegas	First Vice-President
W. H. FROLICH, East Ely	Second Vice-President
HORACE J. BROWN, Reno	Secretary-Treasurer

COMPONENT COUNTY MEDICAL SOCIETIES

WASHOE COUNTY

The first monthly meeting of the year of the Washoe County Medical Society was held in the State Building the evening of Tuesday, January 9. The retiring president, Dr. A. R. Da Costa, sang his swan song, and made a very short gracious speech in which he thanked the members for their coöperation in the maintenance of the society during the year 1933. Doctor Da Costa's term as president was marked with an especially good year. The society collected no dues in 1933, by reason of the strenuous depression, and very fortunately the year was concluded, after paying all expenses, with over \$240 in the treasury. Doctor Da Costa then introduced the incoming president, Dr. H. A. Paradis of Sparks, who made a very practical talk, outlining in general the policy which we would try to carry out this ensuing year. No case reports were presented. Doctor Da Costa, seconded by Doctor Morrison, moved that the dues for this year be five dollars, and the motion was passed. It was also ordered, by motion and vote, that the secretary-treasurer collect only dues for the county society, and not the state society, as had formerly been the custom. A letter was read from the Nevada State Nurses' Association pertaining to the appointment of nurses in the new hospital from outside the state of Nevada. On motion of Doctor Sullivan, and seconded by Doctor Crevelin, the letter was ordered placed on file. Doctor Morley of Gardnerville urged the importance of exhibiting clinical cases and their histories before the society. Dr. J. LaRue Robinson referred to a paper in his possession with reference to medical insurance. The president appointed Doctors Bart Hood, Miller, and Da Costa to investigate this paper as to its applicability to our county affairs, and to report to the next meeting.

The president then called upon the first speaker of the evening, Dr. A. W. Macpherson, who read a paper on *Spinal Anesthesia*. The essence of the paper was that spinal anesthesia undoubtedly has a higher mortality than any other anesthetic. A spinal anesthetic produces better relaxation and operative condition

than any other anesthetic agent. The use of the spinal anesthetic depends upon whether the advantages to the surgeon overbalance the increased risk. Certain operative procedures, such as repair of lower intestinal obstructions and difficult appendectomies, must have the degree of relaxation effected by spinal anesthesia. In such cases, although the risk is increased, spinal anesthesia is the chosen anesthetic procedure. Spinal anesthesia is best used combined with a regional anesthetic. The technique of administration varies widely. The simplest procedure is the safest. A set routine technique should be established and adhered to.

Doctor Macpherson's paper was followed by one on *Ideal General Anesthesia* by Dr. A. R. Da Costa. The first part was devoted to a brief, historic review of anesthesia, followed by a short discussion on the comparative differences in anesthesia of chloroform, ether, nitrous oxid, and ethylchlorid. Induction anesthesia was dwelt upon, and various drugs named as suggested in the present-day pharmacopeia. Each of these induction drugs varied according to the choice of the surgeon or the anesthetist. But in Doctor Da Costa's opinion, usually where a general anesthesia was employed, induction by one-sixth of a grain of morphin by hypodermic and the anesthesia begun with nitrous oxid and finished with ether, the most ideal result was produced. Inasmuch, said the essayist, as men differ in their opinions, so likewise they differ not only in their choice of the anesthetic, but in its administration, and also with the drug if any is used for the induction period.

Doctor Da Costa's address was a scholarly address, covering all points and consequences following general anesthesia, especially ether anesthesia.

In the discussion which followed the presentation of these papers, some of the older practitioners recited their experience with what they knew of chloroform for inducing general anesthesia. Doctor Maclean stated that during his internship in the Royal Edinburgh Infirmary there was a record of ten thousand chloroform anesthetics without a single death, but with the next anesthesia for a minor casualty, the patient died. This observation, as to the comparative difference of ether and chloroform, was sustained by many of the older practitioners who had used chloroform fairly extensively, especially in obstetric cases, given under almost every condition without a fatality. One of our leading practitioners was of the opinion that chloroform would come into its own again in America, as it is already the leading anesthetic drug of Great Britain. The fact was brought out that the anesthetist not accustomed to administering chloroform had better learn how before doing it; and in this learning how, after a study of the patient with reference to his risk, that chloroform should be administered, bearing in mind that, in overdoses, it is a distinct protoplasmic poison, and that rapid administration of chloroform produces a high degree of concentration in which the danger point lies. It was also demonstrated that if the anesthetist used fifteen to eighteen drops a minute in administration, it produces about 3 per cent degree of concentration, while a degree of 5 per cent concentration is dangerous. The anesthetist should be the artist of his profession in whatever choice of medication is used; and unless qualified by experience and scientific knowledge, he had better not be an anesthetist, but call in someone who is an expert in this particular line.

THOMAS W. BATH, *Secretary*.

Significance of Vitamins.—Harris states that correct nutrition cannot be left to instinct, to the use of natural unspoiled foods, to a varied diet or to a process of free selection. Recent official reports show that no less than from 80 to 90 per cent of the elementary school population in London gave evidence of having had some degree of rickets, notwithstanding the decreasing severity of the disease. Statistical data have been collected to show that, under our climatic conditions, unless special prophylactic measures are taken, some degree of rickets supervenes in a large propor-

tion of instances with an appreciable proportion of severe cases, and that no common foodstuff contains sufficiently large amounts of the antirickets vitamin. Cod-liver oil has proved a sterling remedy, but has the disadvantage that it may be impracticable to give enough to insure full protection in every case. Experience shows that the most certain remedy is viosterol. From a practical standpoint it is sometimes an advantage to use a food in which the requisite quantity of viosterol has already been incorporated by the manufacturers. Ultraviolet therapy presents difficulties in the administrative direction for "wholesale" prophylaxis. For curative treatment, viosterol is undoubtedly the method of choice; it can easily be given at a sufficiently high and precisely standardized level. When administering viosterol it is essential to adhere strictly to the correct dose, since overdosage gives rise to hypervitaminosis. Contrary to what is often supposed, the toxic overdose for the human being is close to the optimal therapeutic dose. The author recommends a dose of 1,500 international units a day for ordinary prophylactic use, and 3,000 or a maximum of 5,000 units for curative treatment. Experience shows that smaller doses may be only partially protective. The minimal toxic dose for the infant is about 10,000 units. The author discusses the mode of action of vitamin D and condemns parathyroid treatment for infantile tetany and other conditions of calcium or phosphate deficiency arising from inadequate retention of food calcium and phosphate. Vitamin A cannot be regarded as a general anti-infective agent, although it is advisable to insure that diets are adequately provided with it because the offspring receives but a moderate amount prenatally and in the milk. There is no evidence to support the suggestion that the prevalence of constipation and stasis is due to the lack of vitamin B. It is essential that all infants should be dosed with adequate vitamin C (orange juice), as this vitamin is destroyed to a greater or less extent during the pasteurization of milk.—*British Medical Journal*.

Oral Bismuth in Treatment of Syphilis.—Brigham treated a number of patients suffering from syphilis with glycerite of bismuth, administered orally. There has been marked improvement, both clinically and serologically. The dosage is often run up to 20 minims (1.3 cubic centimeters) three times a day. In weak and poorly nourished patients this dosage shows slightly toxic results, manifested first in a soreness of the gums similar to that due to mercury. When the dosage is reduced, these symptoms quickly disappear. Glycerite of bismuth has long been used as a tonic, and patients usually remark that they feel much better after taking the bismuth preparation. In no case in which it has been used has the preparation failed to produce good clinical results, and only in a few cases did it fail to produce excellent serologic results. The medication of this form of bismuth was frequently continued for a period of three months with a brief rest and then another period of three months to clear up old cases. The oral administration of bismuth has proved a palatable way of giving the drug and is well tolerated by the patients, and many of them prefer it to hypodermic medication. The advantage over the hypodermic medication is that the patient is getting a continuous daily supply of bismuth, and not in large doses at frequent intervals.—*Ohio State Medical Journal*.

Carbon Dioxid in Treatment of Bronchial Asthma.—Faragó shows that, in addition to the medicinal and dietary treatments, carbon dioxid inhalation has a certain place in the symptomatic treatment of bronchial asthma. He found that some asthmatic attacks and dyspneas can be favorably influenced by the inhalation of an 8 per cent mixture of carbon dioxid and oxygen. The inhalation of this mixture effects a decrease in the alkali reserve and an increase in the lactic acid content of the blood. The pH of the urine remains the same, while the ammonia elimination decreases.—*Zeitschrift f. d. ges. Experimentelle Medizin*.

MISCELLANY

Under this department are ordinarily grouped: News; Medical Economics; Correspondence; Twenty-five Years Ago column; Department of Public Health; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings

American Medical Association, Cleveland, Ohio, June 11 to 15, 1934. Olin West, M. D., Secretary, 535 North Dearborn Street, Chicago, Illinois.

Annual Congress on Medical Education and Licensure, Chicago, Illinois, February 12 and 13. W. D. Cutter, M. D., Secretary, 535 North Dearborn Street, Chicago.

California Medical Association, Riverside, April 30 to May 3, 1934. Emma W. Pope, M. D., Secretary, 2004 Four Fifty Sutter, San Francisco.

California-Nevada Section of American College of Surgeons, Los Angeles, March 12 and 13, 1934.

Clinical Congress of the American College of Surgeons, Boston, October 15 to 19, 1934. Franklin H. Martin, M. D., Director General, 40 East Erie Street, Chicago, Illinois.

Medical Broadcasts*

American Medical Association Health Talks.—The American Medical Association broadcasts each Monday afternoon from 5 to 5:15 p. m., eastern standard time (4 p. m., central standard time), over the network of the National Broadcasting Company.

The American Medical Association broadcasts on Tuesday and Thursday morning from 8:55 to 9 a. m., central standard time, over Station WBBM (770 kilocycles, or 389.4 meters).

There is also a fifteen-minute talk, sponsored by the Association, on Saturday mornings from 9:45 to 10 o'clock, central standard time, over Station WBBM.

San Francisco County Medical Society.—The San Francisco County Medical Society broadcast program for the month of February is as follows:

Tuesday, February 6—KJBS, 11:15 a. m., and KFRC, 1:35 p. m. Subject: Focal Infection.

Tuesday, February 13—KJBS, 11:15 a. m., and KFRC, 1:35 p. m. Subject: Colds and Their Complications.

Tuesday, February 20—KJBS, 11:15 a. m., and KFRC, 1:35 p. m. Subject: Pneumonia.

Tuesday, February 27—KJBS, 11:15 a. m., and KFRC, 1:35 p. m. Subject: Communicable Diseases.

Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of February is as follows:

Thursday, February 1—KFAC, 9:15 a. m. Subject: Your Doctor and You.

Saturday, February 3—KFI, 9:15 a. m. Subject: Health Talk.

Tuesday, February 6—KECA, 11:15 a. m. Subject: Health Talk.

Thursday, February 8—KFAC, 9:15 a. m. Subject: Your Doctor and You.

Saturday, February 10—KFI, 9:15 a. m. Subject: Health Talk.

Tuesday, February 13—KECA, 11:15 a. m. Subject: Health Talk.

Thursday, February 15—KFAC, 9:15 a. m. Subject: Your Doctor and You.

Saturday, February 17—KFI, 9:15 a. m. Subject: Health Talk.

* County societies giving medical broadcasts are requested to send information as soon as arranged (giving station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

Tuesday, February 20—KECA, 11:15 a. m. Subject: Health Talk.

Thursday, February 22—KFAC, 9:15 a. m. Subject: Your Doctor and You.

Saturday, February 24—KFI, 9:15 a. m. Subject: Health Talk.

Tuesday, February 27—KECA, 11:15 a. m. Subject: Health Talk.

Nineteen Thirty-Four State Elections.—In the public press it is stated that a primary election will be held in California on August 28 and that the final election for state officers will be held on November 6. This year one United States Senator, the Governor, and an entire state ticket will be voted upon. In local districts a goodly number of county and local officers will come up for election. Registration of voters, under the permanent registration law, is in progress in California throughout the year except for thirty-nine days preceding any particular election, when it shall cease for that particular election. Therefore all voters should be sure that they are registered at least forty days prior to any election if they desire to vote.

American College of Surgeons—Meeting in Los Angeles on March 13-14, 1934.—A cordial invitation is extended to the medical profession of California, Nevada, and Arizona by the president and Board of Regents of the American College of Surgeons, the California State Executive Committee, and the Los Angeles Committee on Local Arrangements to attend the California-Nevada-Arizona sectional meeting of the college at Los Angeles on Tuesday and Wednesday, March 13 and 14, 1934. An excellent two-day program is being prepared, consisting of well-arranged clinics in general surgery, and eye, ear, nose and throat surgery at the local hospitals; clinical addresses and scientific sessions in which a number of distinguished leaders in surgery will participate, and a hospital conference for the discussion of medico-administrative and other problems of interest to the medical profession, hospital administrators, trustees, and others. The sessions will be brought to a close by a large community health meeting, at which the visiting speakers will talk to the people of the community on important health and hospital topics in the interests of scientific medicine.

This meeting will be of scientific value to every physician, as well as affording an opportunity of becoming more familiar with the Hospital Standardization Movement which has done so much for the practice of medicine in all its branches, and which should be furthered to the fullest extent. Hospital problems are now of greater interest to the medical profession than ever before.

The Los Angeles Committee on Local Arrangements is leaving nothing undone to make this a most successful meeting. A large attendance and a good program are assured. Further information pertaining to this meeting can be obtained by addressing Dr. Clarence G. Toland, 1930 Wilshire Boulevard, Los Angeles, chairman, or Dr. C. Hiram Weaver, 1709 West Eighth Street, Los Angeles, secretary of the Committee on Local Arrangements.

New York Polyclinic Medical School and Hospital. The new physical therapy department of the New York Polyclinic Medical School and Hospital was opened on Monday, December 11, 1933. Many prominent physicians and surgeons as well as other guests were present. This department is located in the new clinic building of the Polyclinic Hospital, and is under the supervision of Dr. Richard Kovacs.

Food and Drug Bill.—An Associated Press dispatch dated January 18, gives the following information:

Senator Royal Copeland, Democrat of New York, called a meeting of the senate commerce subcommittee for late in the afternoon, with a view to having his redrafted bill to regulate the sale of foods, drugs and cosmetics substituted for the original measure which drew widespread opposition.

Despite the revisions which Senator Copeland said were designed to meet objections to the provisions giving broad powers to the secretary of agriculture and the advertising penalty section, leaders said a stormy journey faces the measure in both the committee and the senate.

Rexford G. Tugwell, assistant secretary of agriculture, who framed the original bill, has expressed disappointment at the changes made by Senator Copeland.

Mid-Winter Clinical Course—Eye, Ear, Nose, and Throat.—The third mid-winter clinical course in ophthalmology and otolaryngology commenced in Los Angeles on January 15 and continued through January 26.

The guest lecturers were the following: Professor Anton Elschnig of the German University Eye Clinic at Prague, Czechoslovakia; Dr. Hans Knopf, Marienbad, Czechoslovakia; John F. Barnhill, M. D., University of Indiana; Edward C. Sewall, M. D., Stanford University Medical School, San Francisco; Hans Barkan, M. D., Stanford University Medical School, San Francisco; Harry L. Baum, M. D., Denver, Colorado; Vern O. Knudsen, Ph. D., University of California at Los Angeles; Ernest M. Hall, M. D., School of Medicine, University of Southern California.

In addition to the cadaver work given in the School of Medicine of the University of Southern California, clinics in eye, ear, nose and throat were held at the Los Angeles County General Hospital through the courtesy of the attending staffs on those services.

Southeastern Surgical Congress.—The Southeastern Surgical Congress will hold its fifth annual assembly in Nashville, Tennessee, March 5, 6, and 7. The Andrew Jackson Hotel will be hotel headquarters and the lectures and exhibits will be in the War Memorial Building. The following doctors will occupy places on the program: Fred H. Albee, New York; W. Wayne Babcock, Philadelphia; S. O. Black, Spartanburg; Vilray P. Blair, St. Louis; Frank K. Boland, Atlanta; J. B. Brown, St. Louis; D. B. Cobb, Goldsboro, N. C.; George W. Crile, Cleveland; T. C. Davison, Atlanta; John F. Erdmann, New York; P. G. Flothow, Seattle; Seale Harris, Birmingham; M. S. Henderson, Rochester, Minn.; Arthur E. Hertzler, Halstead, Kansas; Chevalier Jackson, Philadelphia; Walter C. Jones, Miami; Dean Lewis, Baltimore; Joseph F. McCarthy, New York; C. Jeff Miller, New Orleans; A. J. Mooney, Statesboro, Ga.; John J. Moorhead, New York; Edward T. Newell, Chattanooga; Fred Rankin, Lexington, Ky.; Paul H. Ringer, Asheville; Stewart Roberts, Atlanta; George H. Senken, New York; Phil C. Schreier, Memphis; Arthur M. Shipley, Baltimore; H. E. Simon, Birmingham; A. O. Singleton, Galveston; J. R. Young, Anderson, S. C.; Waitman F. Zinn, Baltimore.

For information write Dr. B. T. Beasley, 1019 Doctors Building, Atlanta.

American Public Health Association.—The American Public Health Association announces that its sixty-third annual meeting will be held in Pasadena, September 3-6, 1934. The Western Branch of the American Public Health Association, with a membership of more than 1,200 from eleven western states, will hold its fifth annual meeting at the same time.

Dr. J. D. Dunshee, health officer of Pasadena, has been appointed chairman of the local Committee on Arrangements. He will be assisted by Dr. John L. Pomeroy, president, and Dr. W. P. Shepard, secretary of the western branch, and other prominent public health authorities on the west coast.

Microscopic Pathology and X-Ray Conferences at Riverside.—In order to make it possible for members to attend both the Microscopic Pathology and the X-Ray Conferences at Riverside on Sunday, April 29, 1934, the Pathology Conference will be held from 10 a. m. to 3 p. m., and the X-Ray Conference from 3 to 5 and from 8 to 10 p. m.

On account of space limitations it will be necessary to limit the number in attendance to forty at each conference. Reservations may be made through the office of the Cancer Commission, 450 Sutter Street, San Francisco.

Announcements of program and committees in charge will appear in the next number of CALIFORNIA AND WESTERN MEDICINE.

Federal Relief Aid.—A total of more than \$36,700,000 was spent for unemployment relief in California during the calendar year 1933, according to a preliminary report made by the California State Emergency Relief Commission at a week-end meeting in the State Building.

Archbishop Edward J. Hanna is chairman of the Commission, a nonpartisan, nonsectarian, nonsalaried body, appointed by the Governor.

The monthly average of California families aided was 119,000, representing 504,600 persons.

Of the total amount spent, \$9,800,000 was Reconstruction Finance Corporation loans to counties, \$7,900,000 was in grants from the Federal Emergency Relief Administration, \$5,200,000 was spent by counties from loans they had obtained from state unemployment relief bond issue, and \$13,800,000 came from various county funds.

Federal relief moneys were distributed to forty-five of the fifty-eight counties, while twenty-one counties received funds from the state bond issue. As an operating principle it was agreed that federal, state, and county governments should each contribute one-third. —San Francisco *Examiner*, January 21.

Floating Congress of Pan-American Medical Association, March 14 to 30, 1934.

President: Dr. John O. McReynolds, Dallas, Tex.

Secretaries: Dr. Joseph J. Eller, 745 Fifth Avenue, New York, N. Y.; Dr. J. E. Lopez, Silvero, Cuba.

The Pan-American Medical Association announces that the plans for the Fifth Scientific Congress are well under way. This will be held in the form of a sixteen-day cruise to Cuba, Panama, Colombia, Venezuela and Puerto Rico, sailing from New York on March 14, 1934, and returning on March 30, 1934. The steamship *Pennsylvania*, a beautiful modern ocean liner of 32,000 tons displacement, has been specially chartered for the Association. The steamship *Pennsylvania* caters to every whim and desire of the most exacting traveler and is an ideal choice of ship for the Floating Congress.

The Governors of the Fifth Congress are as follows:

Chevalier Jackson, Governor of North American Activities.

Hugh Young, English-speaking Governor for Havana.

J. A. Presno, Spanish-speaking Governor for Havana.

José G. Lewis, English-speaking Governor for Panama.

Charles Mayo, Governor of Floating Section.

J. J. Vallarino, Spanish-speaking Governor for Panama.

Lewellys Barker, English-speaking Governor for Caracas.

Harlow Brooks, English-speaking Governor for Cartagena.

Daniel Brigard, Spanish-speaking Governor for Cartagena.

Miguel R. Ruiz, Spanish-speaking Governor for Caracas.

George W. Bachman, Spanish-speaking Governor for San Juan.

Damasco de Rivas, English-speaking Governor for San Juan.

The congresses of the Association which were held in Havana in 1929, Panama City in 1930, Mexico, D. F., in 1932, and in Dallas in 1933, did much to cement friendly relations and to stimulate the interchange of medical science among the various countries in the Western Hemisphere—an aim of the Association which will again be furthered by this cruise.

The decision to make the Fifth Congress of the Association a Floating Congress is a most happy one, for it gives the members and guests of our Association an opportunity of visiting several Latin American countries and of acquainting themselves with each other's medical problems. This trip, furthermore, will be an expression of our friendship and good will towards our Latin-American neighbors.

ITINERARY

S. S. PENNSYLVANIA—SIXTEEN DAYS

Port	Arrival	Departure
New York		Mar. 14—12:00 noon
Havana	Mar. 17—10:00 a. m.	Mar. 17—10:00 p. m.
Colon	Mar. 20—10:00 a. m.	Mar. 20— 8:00 p. m.
Cartagena	Mar. 21—12:00 noon	Mar. 21— 5:00 p. m.
Puerto Cabello ..	Mar. 23— 6:00 a. m.	Mar. 23— 5:00 p. m.
La Guaira	Mar. 24— 6:00 a. m.	Mar. 24— 5:00 p. m.
San Juan	Mar. 26— 6:00 a. m.	Mar. 26— 5:00 p. m.
New York	Mar. 30— 8:00 a. m.	

Rates—\$185 and up

At various ports of call there will be receptions arranged by the local doctors. It has been decided that out of sentiment and respect for the great South American patriot and leader, Bolivar, the Congress disembark at Santa Marta, Colombia, the birthplace of Simon Bolivar. In Venezuela the government will defray all expenses of the members, wives and families while on Venezuelan soil and this includes sight-seeing, automobiles, hotels, etc. In Venezuela our entire party will motor from Puerto Cabello to Maracay, where a luncheon reception will be given in honor of the Congress by President Gomez. After luncheon there will be a two-hour session of scientific papers at which certain North American physicians will participate. That evening there will be a grand ball and banquet and the entire party will stay overnight in Maracay. At San Juan, Puerto Rico, the Association will be the guests of the Columbia University School for Tropical Medicine.

The scientific program will consist of twenty-four papers to be read in each medical section specialty or six addresses daily for four days. This will be done during the voyage from Havana to Caracas. There also will be a scientific congress of one day in Venezuela.

The Pan-American Medical Association invites members of the medical profession in good standing to join this delightful cruise with their wives and families. Physicians joining the cruise may also invite a limited number of non-medical friends.

Aside from the scientific program, there will be special features of entertainment, such as bridge tournaments, deck sports, swimming in the two outdoor pools, talking pictures, dancing, concerts, costume balls, etc., so that everyone should be assured of having a delightful time.

Participating doctors from the West Coast can leave the *Pennsylvania* at La Guaira and make direct connections back via Colon, the Panama Canal and the western coast, visiting various ports in Central America, returning to San Francisco April 10 or 14.

The American Express Company has been appointed the official agent for the convention cruise, and will handle all reservations, subject to the approval of the Association. Any physician interested in attending this Congress can secure additional information by communicating with Dr. Charles P. Mathé, vice-president of the Association, 450 Sutter Street, San Francisco.

Erratum.—In the article on "Ruptured Ventral Hernia" by H. M. Ginsburg, as printed on page 49 of the January CALIFORNIA AND WESTERN MEDICINE, the word "centigrade" was used instead of "Fahrenheit."

CORRESPONDENCE

Subject of following letter: A presentation of some of the medical phases of the California Workmen's Compensation Act.

To the Editor:—Enclosed please find manuscript recently furnished the Los Angeles County Medical Society for the Society's "Bulletin." It occurs to me that it might be of interest to the readers of CALIFORNIA AND WESTERN MEDICINE. If in your opinion it gives desirable information to the profession on the subject-matter, kindly give it space in one of your columns.

Fraternally yours,

JOHN H. GRAVES, M. D.,
Medical Director.

"Apparently very few members of our profession understand the purposes and method of operation of the Workmen's Compensation Laws. When the Act was before the Legislature in 1913, it would have been an easy matter for the medical profession to have secured any reasonable arrangement for distribution of this work and payment for services rendered. I still recall vividly my futile efforts to interest the then leaders of the profession in any way in procuring provisions that would be satisfactory to the profession.

"The law, as proposed and as adopted, disregarded certain phases of accepted medical ethics. For instance, the patient's doctor could be selected by the insurance carrier, and if the patient had already selected his own doctor, the insurance carrier could and often had replaced the patient's doctor with one of its own choosing. This is done on the theory that as the insurance carrier is compelled to pay for the medical service, the carrier should exercise the right of selection.

"Of course, the law was intended primarily to protect employees from financial loss due to injury received in the course of their employment. It soon was construed to indemnify them also against injury to their health and consequent loss of employment due to diseases which arose as a result of that employment, or exacerbation of preëxisting disease due to their occupation. Accordingly a commission was created, the members of which were appointed by the Governor to serve for varying lengths of time. It became the duty of the Commission, on which no graduate of medicine has ever served, to pass upon highly controversial and technical problems such as correctness of diagnosis, nature and extent of disability, reasonableness of medical and surgical fees charged for service rendered, and innumerable other problems which required medical education and experience to understand. Consequently, the Commission created a medical department consisting of a medical director and assistant medical directors to whom they could turn for consultation and advice in such matters.

"Now separate and quite distinct from these activities there was, under the law, provision made for the establishment of the State Compensation Insurance Fund. To all intents and purposes this fund is a big casualty insurance company operated and controlled by the State of California instead of by private interests, and is in direct business competition with all insurance companies writing casualty insurance in California. This state insurance company, known as the 'Fund,' is organized much along the same lines that any similar insurance company is organized; that is, it has a business manager, a legal department, a medical department, and various other departments similar to those of other insurance companies. An insurance company (and the State Compensation Fund is one of such) insures employers against financial loss for injuries which may result to their employees in the course of their employment. This necessitates furnishing not only indemnity for disability, loss of wages due to injury, and death benefits in case of death, but medical and surgical service and hospitalization.

"Treatment Services.—This medical service which the State Fund contracts to render is under the direction and control of its medical department, and the method of procuring this service varies in different districts according to the nature of the industries within the district, population, hospital facilities and various other factors. In some of the larger centers the medical department of the 'Fund' appoints doctors who constitute a 'panel' for rendering emergency service. In other communities no such panel exists and the injured workman is free to go to any reputable member of the medical profession for treatment, if the doctor chosen is not objected to by his employer, or the insurance carrier if the employer has taken out insurance. This is the case in Los Angeles, where no panel has been created and where injured employees are free to choose their own medical adviser unless their employer or the insurance carrier objects.

"Consultation and Special Services.—In some communities the Fund maintains emergency panels and also lists of names of doctors to whom it refers unusual cases that apparently have not progressed favorably in the hands of the physicians originally called, and for certain special injuries that seemed to require the services of those medical men who have concentrated their attentions on one of the medical or surgical specialties.

"In other communities lists of this type are maintained where no emergency panels exist, and this is true of your city of Los Angeles.

"Again, in some communities no panels or lists of any type are maintained, and the injured employee seeks his own physician or surgeon, who continues to treat the case until either recovery occurs or it is apparent that special and expert service is indicated.

"Now the question is asked, 'By what authority does the medical department select those physicians and surgeons whose names appear on the various panels?'

"The following is quoted from the Workmen's Compensation Laws:

"Sec. 38 (a). The commission is hereby vested with full power, authority and jurisdiction over the state compensation insurance fund and may do and perform any and all things whether herein specifically designated, or in addition thereto, which are necessary or convenient in the exercise of any power, authority or jurisdiction over said fund in the administration thereof, or in connection with the insurance business to be carried on by it under the provisions of this act, as fully and completely as the governing body of a private insurance carrier might or could do."

"Sec. 38 (b) (4). The commission may conduct all business and affairs, relating to the state compensation insurance fund, whether herein specifically designated or in addition thereto."

"Sec. 39. In conducting the business and affairs of the state compensation insurance fund, the manager of the said fund or other officer to whom such power and authority may be delegated by the commission as provided by subsection (c) of section thirty-eight thereof, shall have full power and authority: (7) To contract with physicians, surgeons and hospitals for medical and surgical treatment and the care and nursing of injured persons entitled to benefits from said fund."

"It appears to me on investigation that the Fund suggests the names by just the same authority and with the same freedom that the medical department of any other casualty company selects those who are to render service.

"The question is also asked, if I understand it correctly, 'How are the physicians whose names appear on the panels of the Fund selected?'

"As to how they have been selected in the past I am not in a position to answer, but it is my opinion that they were selected because of their professional qualifications, their character, their personality and their acquaintance with officials of the Fund, including those of the medical department. At the present time, however, they are being chosen because of their professional qualifications and their willingness to perform industrial accident work.

"In your own city of Los Angeles, the reference list that had been in use for a long period of time contained the names of many excellent men, some of whom I have long known personally and well. Like any long list of doctors, there were names of some

who are considered by everyone as outstanding in their profession. There were other names of whom this probably could not be said.

"Many, especially in our own profession, have long entertained the belief that a much wider distribution among the medical profession of Fund cases is desirable from the standpoint of the employee, the employer, the profession, and the Fund. The question arises, how can this be procured? It is my personal belief that if the names of the entire medical profession in Los Angeles were added to the reference list that was being used prior to the recent change, the cases would have continued to go to the same men who were at that time performing this work. The reason for this is because many of those gentlemen had established, as a result of their connection with the Fund, reputations in their various specialties, that they had become acquainted with the officials of the Fund, and that they had a thorough knowledge of the necessity for prompt reports which would briefly yet adequately describe the nature of the injury and the progress of the case, that they knew how and when to render bills for service, having, in fact, a thorough knowledge of all of the paper work or, as it is sometimes called, the 'red tape' of the business.

"So, if a wider distribution of the work is desirable, it seemed that it could be best accomplished by first of all removing all of the names then on the list and replacing it with the names of equally competent men who never had had an opportunity of performing this work or of profiting by the experience and the added income.

"As has been stated before, it seems wise to continue the policy of adding from time to time additional names including many of those who previously were on the referred list.

"While practice of this nature can no more be equally distributed than can private practice, it would seem that a much wider distribution is not only possible, but highly desirable.

"I think the members of your society should know that names of physicians to whom patients are to be sent are chosen more nearly in rotation than heretofore, and also that it is a mistake to believe that those men who are now on the panel list are getting anything at all like the number of cases or receiving anything approaching the compensation that those physicians who were on the list during the industrial activity which preceded the depression received. The statement has been made that a few physicians on the previous list received monthly checks ranging from \$1,000 to \$1,500 for services rendered to employees insured under the Fund. On inquiry, I am informed that this is correct.

"Conditions at present are entirely different. For instance, during the month of September there were three outstanding checks, the largest of which is to a hospital association which does emergency business and over which the Fund exercises no control, and could only control by the appointment of an emergency panel and insisting upon cases going direct to the men on the panel. The next largest check for \$493.95 was in favor of an orthopedist who was also on the previous list and who has since been added to the present list. The other large check of \$489.20 was for a firm of doctors who were not on the previous nor are they now on the present list. I note the absence of checks for some of the men who are on the list and other checks not exceeding \$5 for men whose names are on the list for reference work.

"This would seem to answer the questions which have been asked. If not, it will be my pleasure to give any additional information on the subject.

"Under one previous administration a tremendous amount of this work was controlled and handled by one physician. It is commonly believed, and probably true, that the financial returns to him were very large.

"Such an arrangement under the law is always possible, but the present administration believes that a wide distribution of the cases to competent doctors will in the long run prove more satisfactory to all concerned.

"And that is the policy which is now in force.

"Under the present administration of these medical activities, one of the large county medical societies was offered the opportunity to accept and distribute among its members the work of the Fund. For reasons best known to themselves both the opportunity and the responsibility were declined. If the Los Angeles County Medical Society cares to submit a list of names for the performance of this work in your community, I shall use my best endeavors to have future appointments selected from the list furnished."

Subject of following letter: Warning concerning a solicitor.

To the Editor:—Some weeks ago a Mr. Tanner called at our office soliciting signatures for a petition to Congress asking that there be no changes made in the present status of veterans' disability which granted medical service and hospitalization only for actual service-connected disabilities.

This petition was supposed to be sponsored by the Disabled American Veterans of the World War. It naturally appealed to medical men, as it was aimed against further expansion of the Government medical service.

Together with the signature to the petition a modest financial contribution to the expenses of the campaign was requested.

The writer decided to inquire further before contributing, and a reply from the national headquarters of the Disabled American Veterans of the World War brought a reply that they had no information relative to Mr. Tanner, and that the D. A. V. does not employ agents soliciting contributions relative to congressional matters.

This Mr. Tanner was a very tall man, well over six feet, broad-shouldered and red-faced. He had a beautiful document purporting to be an authorization from the D. A. V.

A warning about this individual published in CALIFORNIA AND WESTERN MEDICINE might save many of our members from being imposed upon.

Yours truly,

D. K. PISCHEL, M. D.

Subject of following letter: A communication from the California Division of Industrial Welfare on the subject of working hours for women.

Los Angeles, January 18, 1934.

To the Editor:—A knowledge of the wage and hour provisions in the enclosed copy of Industrial Welfare Commission Office Order No. 9a should be in the possession of every employer of office women and/or minors in the State of California. This order became effective August 28, 1933, and stipulates a minimum wage that may be paid in this state to a woman who has had no experience of \$12 a week, and to one who is under eighteen years of age a minimum of \$10 a week as a beginner. There is an increase through a period of six months until the apprentice reaches \$16. This is the least wage that may be paid to a woman and/or minor in an office who has had six months in this state in the line of work which she is employed to do.

Through your channel of publicity will you see that this information is extended to the members of your profession?

You will find in Section 8, (a) and (b), provisions for overtime work, provided that any more strict or limiting provisions that might be set up in a code would prevail. The regulations in this office order do not apply to a registered nurse in her professional capacity.

My office in San Francisco and in Los Angeles will be glad to answer any questions or to provide additional copies of the order as requested.

Yours very truly,

DIVISION OF INDUSTRIAL WELFARE, STATE OF CALIFORNIA.

Mrs. Mabel E. Kinney, Chief.

112 State Building.

CALIFORNIA CHIROPRACTIC ACT *

AN IMPORTANT SUPERIOR COURT DECISION

The following opinion went into the court records when Judge William P. James, on January 16, 1934, handed down his decision in the Superior Court at San Jose, California.

No. 43645

FILED

Jan. 16, 1934

HENRY A. PFISTER, Clerk

By Albert J. Newlin,

Deputy

In the Superior Court of the State of California
in and for the County of Santa Clara

THE PEOPLE OF THE STATE OF CALIFORNIA ON
THE RELATION OF THE CHIROPRACTIC LEAGUE
OF CALIFORNIA, a Voluntary Association,
Plaintiff and Cross-complainant,

vs.

ROSCOE C. STEELE and LOIS B. STEELE, partners
doing business under the style of DRS. STEELE &
STEELE,

Defendants,

vs.

GLEN J. SIPES and J. K. CHRISTIE, and ASSOCIATED
CHIROPRACTORS OF CALIFORNIA, a Voluntary
Association, Interveners and Cross-defendants.

MEMORANDUM OF OPINION

"This cause is prosecuted by the State of California, through the Attorney General, to enjoin the practice of certain healing methods in treating the physical ailments of human beings within the State. It was originally brought against the defendants, Roscoe C. Steele and Lois B. Steele; but through subsequent pleadings, similar charges are brought against interveners and cross-defendants, Glen J. Sipes and J. K. Christie, and these latter will be referred to hereafter, in company with Steele and Steele, as defendants.

"The issues, both of law and of fact, are few and quite definite.

"The defendants have certificates issued to them to practice the healing art, under the Chiropractic Act, and thereby licensed to practice Chiropractic, and not otherwise. They hold no other license to practice any healing art in California.

"They are practicing, and are advertising and holding themselves out to the public as practicing, certain modes of treating the sick or afflicted, termed ophthalmology, nasal therapy, otology, intestinal flushing, pharyngology, laryngology, genito-urinary therapy, proctology, iridiagnosis, scientific colon hygiene, sinusoidal current, electronics, diathermy or artificial fever, d'arsonal auto-condensation, cold quartz, ultraviolet light, galvanic current, and diet.

"These modalities, the defendants claim they are entitled to practice under their certificates issued them by the State, licensing them to 'practice Chiropractic.' If this be so, the case of the State must fail; and hence we are primarily concerned here with the proper construction to be given the Act under which their licenses are issued.

"Some procedural objections have been raised in the case, of which we will first dispose, before undertaking the solution of the main problem.

"The right of the State to regulate the practice of healing arts is conceded. For the proper and practical exercise of this function, it is obviously necessary to set some standards of learning and skill, which should be the qualifications of persons practicing these arts. And to such persons as are shown to possess these qualifications, the State may issue permits or licenses to so practice; at the same time, and as a necessary protective measure, forbid such practice by persons not so licensed. As long as these regulations are uniform in their application, they are proper, and will be upheld.

"Of course, it is conceivable that a strict application of such regulations might exclude from practice persons possessing even a greater degree of skill and learning than is necessary to meet the requirements, but who have not obtained such licenses. The answer to such an objection, however, is apparent on the face of it. If such persons actually possess such deep learning and skill, it should be an easy matter to establish the fact, and obtain the required license by complying with the established regulations.

"Laws regulating the practice of the healing arts are of the highest importance to the public welfare. They are enacted in the necessary protection of the health and lives of the people. The sick and the suffering are credulous of promises to cure; and few have the ability, if they have the inclination, to determine for themselves the qualifications of the practitioner. In the enactment and strict enforcement of these salutary regulations, the people have their measure of safety and protection from

* See also editorial comment in this issue of CALIFORNIA AND WESTERN MEDICINE, page 123.

ignorance or worse. Without such they would be the prey of charlatans and quacks.

"It would be difficult to conceive of anything more directly affecting the public health, or the comfortable enjoyment of life, than these laws.

"And equally certain is it that the violation of them is injurious to public health and interferes with the comfortable enjoyment of life.

"These considerations bring the matter within the legal definition of a nuisance. And, as the practice of the healing art, in violation of the regulatory statutes would affect a considerable number of people, or even an entire community or neighborhood, it would constitute, in law, a public nuisance.

"That the commission of a public nuisance may be enjoined is well settled. Nor does the fact that the act constituting the same is punishable as a crime deprive the State of the right to the more sweeping and effective remedy in equity.

"It is, therefore, my opinion that the facts herein pleaded will justify the relief sought.

"Having disposed of the preliminary objection having to do with the remedy herein sought, the principal issue of the case will be considered.

"It is unlawful for anyone in this State to practice, or attempt to practice, or to advertise or hold himself out as practicing, any system or mode of treating the sick and afflicted, or to diagnose, treat, operate for, or prescribe for, any ailment, blemish, deformity, disease, disfigurement, disorder, injury, or other mental or physical condition of any person, without having, at the time of so doing, a valid, unrevoked license so to do.

"There are various forms of such licenses provided for under several statutes; and each of these licenses or certificates confers upon the lawful holder thereof the right to practice such healing art, by the method, and to the extent, only, as prescribed by the Act under which it is authorized. It is a grant—not a limitation. Its rights conferred are measured by what it expressly permits, and not by what it fails to forbid.

"The defendants, as heretofore stated, hold only certificates or licenses, issued under the Chiropractic Act; and the enabling part of that Act is contained in Section 7 thereof, reading as follows:

"17. Certificate to practice. One form of certificate shall be issued by the board of Chiropractic examiners; which said certificate shall be designated 'License to practice Chiropractic,' which license shall authorize the holder thereof to practice Chiropractic in the State of California as taught in Chiropractic schools and colleges; and also to use all necessary mechanical and hygienic and sanitary measures incident to the care of the body, but shall not authorize the practice of medicine, surgery, osteopathy, dentistry, or optometry, nor the use of any drug or medicine now or hereafter included in materia medica."

"On a reading of this section, with respect to its application to the case at bar, two questions at once present themselves for solution before a proper conclusion herein can be reached.

"1st: What is meant by the use, in the statute, of the term 'Chiropractic'?

"2nd: How much additional license, if any, is conferred by the clause, 'and, also, to use all necessary mechanical and hygienic and sanitary measures incident to the care of the body'?

"With regard to the first question:

"The word 'Chiropractic' is a modern, fabricated word apparently from two Greek derivatives; and may be freely translated as 'manipulation by hand.' It was applied to the system of healing, conceived and developed by Doctor Palmer, about forty years ago. He practiced and taught the system—founding a school therefor, which was the original and central source of Chiropractic theory and practice, and which is still functioning as the parent school of Chiropractic.

"Doctor Palmer defined Chiropractic as '... a system of adjusting the segments of the spinal column by hand only, for the correction of the cause of disease.'

"Another definition is as follows: 'Chiropractic is the science of palpating and adjusting the articulations of the human spinal column only.'

"A third and more comprehensive definition which is found in Dorland's Dictionary is: 'A system of adjustment consisting of palpation of the spinal column to ascertain vertebral subluxations followed by the adjustment of them by hand, in order to relieve pressure upon nerves at the intervertebral foramina, so that the nerve forces may flow freely from the brain to the rest of the body.'

"Without attempting to unduly prolong a discussion of the essential character of Chiropractic theory, it may be stated, generally, that the science or art of Chiropractic is found in these general propositions: that in the brain of the human animal is the point of control of an innate intelligence which sends its controlling forces by way of the spinal cord through the spinal column and then through the various nerve trunks emitting from the spinal cord and passing through the intervertebral foramina to nerve branches ramifying to all parts of the body, through the perfect functioning of which health is maintained, but through interference with the transmission of those innate forces through or over the nerve, disease is produced; that owing to the spinal column being the only segmented structure of bone through which these nerve trunks pass and the possibility of displacement of its segments changing the size and shape of the intervertebral foramina, subluxation occur and there offer interference with the transmission of innate forces directly or indirectly; that all disease is thus traceable to impingements of nerve tissue in the spinal column.

Chiropractic claims the knowledge of this all-inclusive cause of disease and the ability to adjust and correct these displacements of the segments of the spinal column, thereby removing interference with the transmission of the innate forces. It claims that such adjustment does not add any material forces to the body, but allows the innate to restore to normal what it would have had had there been no interference. In this manner, it is claimed, health is restored.

"It will thus be observed that the theory, science or art of Chiropractic is quite definitely circumscribed in its character, scope and practice.

"On the trial of this case, it appeared that there were two groups or schools of Chiropractic, which were generally referred to as 'The Palmer Schools' and 'The Mixing Schools'—these latter schools teaching the practice of the modalities, or some of them, referred to in the pleadings here, and the practice of which it is sought to enjoin in this action. It is claimed on the part of the defendants that, because of licenses or certificates of the defendants entitling them to 'practice Chiropractic as taught in the Chiropractic schools or colleges' and such modalities are, in fact, taught in these latter schools or colleges, that they are thereby licensed to practice such modalities. With this contention the Court is not in accord. It is not alone the fact that the healing art which it is undertaken to practice is taught in such schools or colleges that entitles the licensee to practice the same; but also that it is, fundamentally or essentially, Chiropractic. The teaching of music may be carried on in a Chiropractic school, but that would not make music part of the art or science of Chiropractic. There is no limitation upon what may be taught in such schools; but in order to render teaching of such schools the basis of the licensee's practice, such teaching must be of the art and science itself—which must be Chiropractic. By no stretch of the imagination, in the Court's view, can the practice of these various modalities complained of be brought within any reasonable construction or definition of Chiropractic. If their use is justified at all by the defendants, it must be justified solely upon the theory that the practice of the same is permitted by the clause, '... and also, to use all necessary mechanical and hygienic and sanitary measures incident to the care of the body. . . .'

"It is the contention of the defendants that these various modalities may properly be practiced by one with a Chiropractic certificate as being necessary mechanical and hygienic and sanitary measures incident to the care of the body.

"An examination of the character of these several modalities would seem to quite effectually answer this contention.

"Diathermy, sinusoidal current, d'arsonval autocondensation are all therapies in which various forms of electrical currents are applied to the human body for various purposes . . . all of them possessing elements of grave danger when applied unskillfully—and all of them being as far removed from the broadest possible concept of Chiropractic.

"In the practice of the modalities of proctology and so-called scientific colon hygiene, the practitioner inserts into the body, through the rectum, instruments and other substances up the descending colon through the transverse colon and down the ascending colon as far as the cecum, traversing practically the length and breadth of the interior of the lower abdomen. By no stretch of the reason can it be said that this is a necessary hygienic or sanitary measure incident to the care of the body.

"Nor can the Court view the use of cold quartz or ultraviolet ray as a hygienic or sanitary measure or a mechanical measure incident to the care of the body.

"Genito-urinary therapy includes treatment of all of the genitals and urinary parts of the body, and in these parts are the bladder, prostate gland and the kidneys; and the treatment of which involves the insertion into these parts of instruments, or other materials, and this, it is claimed, is a necessary mechanical hygienic or sanitary measure incident to the care of the body. To state the proposition is at once to refute it.

"The practice of ophthalmology, or treatment of the eyes, nasal therapy, or treatment of the nose, otology, or treatment of the ears, pharyngology, or treatment of the pharynx, and laryngology, or treatment of the larynx, are all special therapies which are ordinarily committed even by those practicing under the all-inclusive physician's and surgeon's certificate to specialists, and can, in the Court's opinion, in no manner be brought within the clause of Section 7 of the Chiropractic Act now under consideration; and are certainly far removed from any known definition of Chiropractic.

"The Court does not intend to, nor does it, express any opinion as to whether the defendants, or other chiropractors of their school, have, or have not, the proper training, knowledge and skill to safely use these modalities in their practice nor whether they should, or should not, be permitted to do so. With those matters it is not concerned. It is here dealing solely with the state of the law of California as applicable to persons holding certificates to practice Chiropractic; and it is the Court's opinion that the practice of the modalities here in question is not included in those things which may be done or practiced under the authority of a license or certificate issued under the Chiropractic Act, as now in effect.

"It follows from the views herein expressed that a decree be rendered for the plaintiff and against the defendants, and each of them, as prayed for, enjoining the defendants from the practice of the modalities in question; and it is accordingly so ordered.

"Plaintiff will prepare and submit findings.

"WILLIAM F. JAMES, Judge."

TWENTY-FIVE YEARS AGO*

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. VII, No. 12, February, 1909

From some editorial notes:

Why Not Good Laws?—A good many wise men have said that it would pay the state richly to allow our legislators to draw an annual salary for, say, ten years, and stay at home and attend to their several businesses. But that is altogether too Utopian. A legislator is to legislate and every two years he must do something. Then why not see that some good things are done; some things for the public health and welfare? Or shall it always be that we have first consideration for the hog and the dollar, and then, if we have time, devote a little of it to children's lives and the public health? . . .

About Editorials.—The question is occasionally asked by some members, and at times presents itself in the form of criticism, "Why does not the journal devote its editorial space to strictly scientific editorials on medical subjects, written by the leading men in the state?" The same question presented itself to the Publication Committee some years ago and was discussed at length. The gist of the matter, without going into details, is about this: There are plenty of medical journals dealing exclusively with scientific medical questions; the scientific editorials in *The American Medical Association Journal*, for instance, are the best of their kind published. This journal was established for the purpose of stimulating organization; of helping the physicians of California in material ways; of bringing to their attention questions of vital sociological importance. . . .

Insurance Impertinence.—Surely, there can be nothing under heaven more absolutely and insultingly impertinent than an insurance company. It calmly says to the medical profession, "You are a cheap bunch and we will dole out to you what we please; we will pay you about what we would have to pay ordinary unskilled labor, and we, the officers, will take all the surplus income as our salaries." . . .

From an article on "The Utilization of Social Waste Products" by W. A. Briggs, M. D., Sacramento.

One of the chief factors in modern industrial progress is the utilization of those by-products which formerly were mostly if not wholly waste. Coal-tar is a noteworthy example of these one-time wastes, which, in so large a measure, constitute not only the wealth of the modern chemist, but, in this particular instance, of the manufacturer, artist, and therapist, also. . . .

From an article on "The Treatment of Tuberculosis with Intravenous Injections of Tuberculin and Atoxyl" by Max Rothschild, M. D., San Francisco.

The following paper gives a report of a number of cases of tuberculosis which have been treated with intravenous injections of Koch's old tuberculin and atoxyl, with more or less rest in bed, and with a preparation of creosote and phenacetin internally. . . .

From an article on "The Itch" by Douglass W. Montgomery, M. D., San Francisco.

With a fine eye out for something with vim and snap to it, the Scotch took the thistle for their emblem.

* This column strives to mirror the work and aims of colleagues who bore the brunt of society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

(Continued in front Advertising Section, page 14)

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA*

By CHARLES B. PINKHAM, M. D.
Secretary-Treasurer

News Items

On January 15, 1934, Governor Rolph reappointed to the Board of Medical Examiners, Doctors Clark L. Abbott, Percival Dolman, and Charles Sturgeon, each for a term ending January 15, 1938.

The 1933 annual report of the Board of Medical Examiners, recently filed with Governor Rolph, mentions that statistics show "the credulous in this country pay \$125,000,000 every year for the upkeep of fortune tellers, crystal gazers, astrologers, numerologists, palmists, card manipulators, tea-leaf readers and other charlatans," the report indicating that out of 3.1 billion dollars spent annually in the United States for the prevention and care of sickness, \$300,000,000 were wasted on patent medicines and \$127,000,000 on cultists not prepared to render professional care. An "army of fakers delude the gullible, break the law, destroy health and not infrequently maim or kill." Closer cooperation between federal, state, and municipal law enforcement agencies gives promise to further curtail this army of fakers.

Radio broadcasting affords unusual opportunities for fakers to approach an enormous group heretofore reached by printed advertisement. The popularity of radio advertising may be accounted for, because to hear something told is more enjoyable than to have to read it. Limited literacy or deficient eyesight is also said to be a factor in the popularity of this new form of advertising. Soothsayers buy time on various broadcast programs, vend hokum at so much per, sell knowledge which they do not possess, and give advice that is often destructive.

Willard Thompson, alias Wilber Lester Parker, referred to in the board's 1931 annual report, again visited California and imposed on our citizens during the year just closed. He was recently reported arrested by federal authorities in Mississippi.

Another 1931 impostor (George Stanley Paris) fell into the clutches of the law in 1933, and is now said to be doing time in the state prison at Folsom.

John W. Ramsey, falsely claiming medical credentials, and in trouble in San Francisco in 1926, is sought by the police on a warrant charging him with violation of the Medical Practice Act, and Frederick Woelffi, falsely claiming medical credentials, is said to be serving a sentence in Napa County.

Again the "face peelers" took their fatal toll, and three licensed physicians and surgeons were called before the board for aiding and abetting the unlicensed in these operations.

Eyelash dye exacted its toll in California as well as elsewhere.

The hospital association racketeers were unusually active in 1933, selling contracts for medical, surgical, dental and hospital services, which complainants said were not fulfilled. The bank accounts of the promoters waxed fat, and the shame of it all lies in the fact that those least able to lose are the ones who are stung.

Faith in mystic charms, bordering on voodooism, is still found among certain residents of our state.

Thirty-eight licentiates were called before the board for various derelictions, the larger number having been charged with narcotic violations. Fourteen licenses were revoked, one license suspended, and fourteen licentiates were placed on probation. Three were dis-

* The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.

(Continued in front Advertising Section, page 14)

CANYON SANATORIUM

REDWOOD CITY, CALIFORNIA

An Open Air Sanatorium for
the Treatment of Tuberculosis
and Diseases of the Chest.



NESTLED IN THE FOOTHILLS

For booklet giving full particulars write **RALPH B. SCHEIER, M. D., Medical Director**
San Francisco Office: 516 SUTTER STREET Telephone DOUGLAS 4486

(Continued from Page 31)

fields: (1) economic planning and control; (2) international relations; (3) social organization and procedure, with special reference to problems of community organization and planning.

Much physical illness, mental disorder, family disintegration, crime, and political and social instability trace their origins to economic causes. In a time of depression, when millions of unemployed are unable to command the necessities of life, there is the incessant question as to why this distressing situation arises in a country where raw materials are plentiful, where technological equipment is of the best, and where workers are eager to apply their productive capacities. The Foundation, although not itself a research agency in the social sciences, is impressed with the importance of research in this field. It therefore seeks to strengthen existing institutions which are collecting and appraising basic information and to assist in advancing particular studies which deal with problems of economic stabilization. For several years it has given support to various studies and organizations concerned with research in this field.

During 1932 substantial new grants were made by the Foundation to a number of investigative organizations, including Harvard University and the Universities of Pennsylvania and Minnesota. Smaller gifts were made to several foreign institutes of research. A large number of institutions were given support in carrying out programs in international relations and in community organization and planning. The total amount appropriated in 1932 for work in the social sciences was \$2,622,567.

In the humanities the program of The Rockefeller Foundation during 1932 was directed toward the support of general research and advanced training of personnel and toward the promotion of projects having international significance. The centers of research and training aided included the Oriental Institute of the University of Chicago; the School of Oriental Studies,

London Institution, University of London; and Yale University.

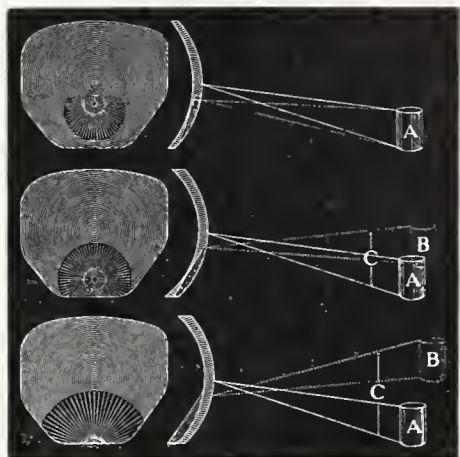
Grants in aid of specific research problems included support to the Institute of Archeological Research at the University of Michigan, which has been carrying on valuable excavations at the site of the ancient city of Karanis in Egypt; aid to the Prussian State Library in connection with a Union Catalogue; and aid toward important lexicographical work carried on by five learned Societies of Germany and Austria, centering at Munich, Germany.

Small sums were granted in support of definite projects of humanistic research carried out by mature scholars. The amount appropriated in 1932 was used mainly for awards to foreign scholars. With funds contributed to the American Council of Learned Societies there have been provided forty fellowships in the humanities. Seventeen of these were granted during 1932. All the awards were postdoctoral fellowships intended to provide opportunity for further training and experience in humanistic research. In addition a grant was made to the American School of Classical Studies at Athens, for fellowships in archeology, in connection with the excavation of the Athenian Agora.

Problems of Disease Control Discussed at Health Convention.—Among the subjects of epidemiological interest discussed at the recent annual meeting of the American Public Health Association were diphtheria immunization and the Schick test, immunization against scarlet fever, the present status of typhoid fever control, and the prevalence of Rocky Mountain spotted fever.

Material was presented from Michigan and from Virginia showing that the Schick test is sometimes at variance with the results obtained by the titration of blood serum for antitoxin content. It was felt by Michigan workers that in adults the Schick test was

(Continued on Next Page)



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(Continued from Preceding Page)

a better measure of immunity than antitoxin content of the blood. Favorable results were reported from the use of alum precipitated toxoid in Alabama and in Virginia.

Papers were presented showing the results of active immunization against scarlet fever in Gary, Indiana, and in the state of Kentucky. The authors who presented these papers felt that scarlet fever immunization had been highly successful but, as was brought out subsequently in discussion, failed to support their claims with satisfactory evidence. The difficulties incident to the isolation and quarantine of scarlet fever

were pointed out and the fact that cases of frank scarlet fever are accompanied by large numbers of cases with related illnesses which cannot be so diagnosed was emphasized.

The importance of carrier protection and supervision was stressed as one of the necessities of present-day typhoid control. It was generally agreed that typhoid vaccination as a measure for community control must be regarded only as a temporary control measure, or a control measure for special conditions. The necessity for using a vaccine of known potency was made clear.

Increasingly large numbers of cases of Rocky Mountain spotted fever have been reported in recent years, particularly in the eastern and southern sections of the country. The opinion of workers in this field is that the increase in the prevalence of this disease has probably been apparent rather than

real, and largely due to better recognition in recent years.

In a paper read before the Engineering Section, it was demonstrated that the possibilities for environmental control of communicable diseases have by no means been exhausted. There is still much to be learned regarding the relationship of such factors as nutrition, light and atmospheric conditions to communicable disease. In a discussion of this paper the effects which better refrigeration, air-conditioning and ventilation may have on communicable disease were stressed.

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A study of the epidemic of measles in Albany in 1926 was presented, showing the manner in which infection travels from one section of the community to another in spite of efforts to prevent its spread.

At a special meeting devoted to epidemic encephalitis, the findings on this subject up to the present time were reported, but without conclusions, as to the means by which the disease is transmitted. The St. Louis outbreak differed from most of those previously reported in that the disease was attended by lower mortality and that in the majority of nonfatal cases recovery was prompt and patients were not left with chronic mental and nervous conditions.—*Health News* (New York State Department of Health).

Causes of Illness in Nine Thousand Families.—Minor respiratory conditions are the most frequent causes of illness, according to a morbidity survey made by the United States Public Health Service through the cooperation of state and local health departments and visiting nurses.

The project covered about 9,000 families in eighteen states with a total of nearly 39,000 person-years of life. The survey report (*Public Health Reports*, Vol. 48, No. 12, March 24, 1933) states that this is "the largest mass of data on the incidence of sickness over a period of time, that is now available for illnesses, of all kinds in a fairly representative general population group."

A total of 8,758 white families in 130 localities in eighteen states were observed for illness for a period of twelve consecutive months between February, 1928, and June, 1931. Each family was visited at intervals of two to four months to obtain the sickness record.

The surveyed families included representation from nearly all geographic sections, from rural, urban, and metropolitan areas, from all income classes, and of both native- and foreign-born persons. The proportions of these various elements included are not identical.

(Continued on Page 39)



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Pathologist

A. H. WARNER, Ph. D.,
Physicist

(Continued from Page 37)

cal with those included in the population of the United States, but the variations are not generally large. In other respects also the surveyed group is not dissimilar to families in the general white population of the United States.

The annual illness rate was 850 per 1000.

Three of the four most frequent specific causes of illness, according to the survey report, may be classified as respiratory. For conditions other than respiratory, accidental injuries head the list, while indigestion and other stomach disorders come next to respiratory conditions among diseases, exclusive of accidents. Following indigestion, but with considerably lower rates, come measles, confinements and ear diseases, with almost identical rates for the three.

Since records obtained at intervals of two to four months could not be expected to cover all the minor respiratory and digestive illnesses but might be expected to be reasonably complete for all cases causing loss of time from work or school or causing the patient to go to bed, rates were computed to show the frequency of these types of cases independent of the total cases reported.

Illnesses that caused loss of time from work, school or other occupation, amounted to 516 per 1000 persons. Illness in which the patient was confined to bed for one or more days amounted to 434 per 1000 persons.

In spite of the usual designation of "minor" respiratory diseases, the three most frequent diagnoses for disabling illness and for illness with one or more days in bed are in the minor respiratory class. The fourth most frequent disabling condition is accidents, but in terms of cases in which the patient was in bed this cause is exceeded by confinements. Indigestion, measles, and tonsil and adenoid operations are the other three diagnoses with rates for disabling cases above 20 per 1000, with the next rate, ear and mastoid conditions, at 13 per 1000.—*New York Health News*.

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ROBERT A. PEERS, M. D., *Medical Director*
Colfax, California

BOOK REVIEWS

List of Books Received

BOOKS RECEIVED

Treatment of the Commoner Diseases Met with by the General Practitioner. By Lewellys F. Barker, M. D., Professor Emeritus of Medicine, Johns Hopkins University; Visiting Physician, Johns Hopkins Hospital, Baltimore, Maryland. Cloth. Pp. 319. Price, \$3. Philadelphia: J. B. Lippincott Company, 1934.

Mental Hygiene in the Community. By Clara Bassett, Consultant in Psychiatric Social Work, Division on Community Clinics, the National Committee for Mental Hygiene, Inc. Cloth. Pp. 394. Price, \$3.50. New York: The Macmillan Company, 1934.

Modern Clinical Psychiatry. By Arthur P. Noyes, M. D., Superintendent of State Hospital for Mental Diseases, Howard, R. I., Formerly First Assistant Physician at St. Elizabeth's Hospital, Washington, D. C.; Formerly Chief Executive Officer at the Boston Psychopathic Hospital. Cloth. Pp. 485. Price, \$4.50 net. Philadelphia: W. B. Saunders Company, 1934.

A Diabetic Manual for the Mutual Use of Doctor and Patient. By Elliott P. Joslin, M. D., Clinical Professor of Medicine, Harvard Medical School; Medical Director George F. Baker Clinic for Chronic Disease at the New England Deaconess Hospital; Consulting Physician, Boston City Hospital, Boston, Mass. Fifth edition, thoroughly revised. Cloth. Pp. 224, illustrated. Price, \$2. Philadelphia: Lea & Febiger, 1934.

Curing our Nerves. By Marshall Morgan Cloud, B. Sc., A. M., M. D., F. A. C. S., Captain, Medical Corps, United States Army, Retired; Formerly Assistant Physician, State Hospital, Topeka, Kansas. Paper. Pp. 206. Pasadena: Pasadena News Syndicate Publishers, 1934.

Annual Report of the Surgeon-General of the Public Health Service of the United States for the Fiscal Year 1933. Cloth. Pp. 128. Price, 75 cents. Washington: Government Printing Office, 1933.

BOOK REVIEWS

Metabolic Diseases and Their Treatment. By Erich Grafe. Translation by Margaret Galt Boise. Pp. 551. Illustrated. Philadelphia: Lea & Febiger, 1933. Price, \$6.50.

This American edition of Grafe's textbook on the metabolic diseases is a sound, up-to-date book, the author having thoroughly revised the original German text prior to its translation. On turning to the table of contents, one notes that the subject-matter dealt with is arranged under five main heads: Part I (46 pages) is introductory in character, since it is given over to general remarks about metabolism and nutrition; Part II (83 pages) presents data that concern the nature and the treatment of nutritional disorders, one chapter being devoted to a discussion of the vitamin deficiency states; Part III (289

(Continued on Next Page)

MEDICAL BOOKS for MARCH

Dorcus & Schaffer:

Abnormal Psychology \$4.00
Dickinson: The Single Woman . . . 5.00
Newsholme: Red Medicine 2.50
Ewen: Handbook of Psychiatry . . . 4.75
Grinker: Neurology 8.50

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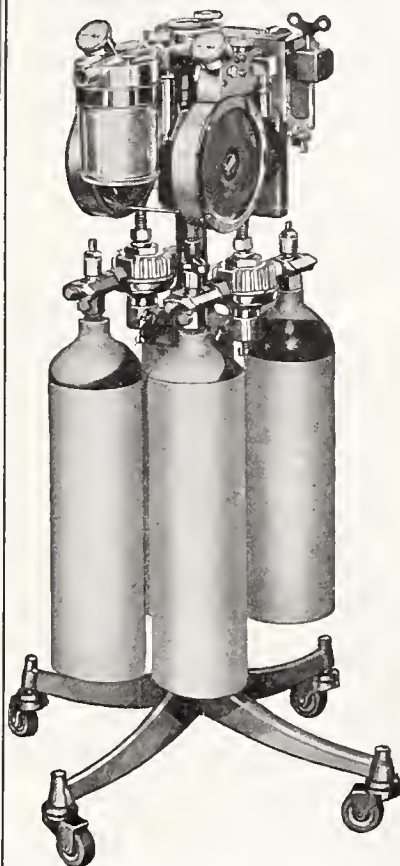
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BOOK REVIEWS

(Continued from Preceding Page)

pages) has to do with the metabolic disorders—obesity, habitual undernutrition, and diabetes mellitus—and their treatment; Part IV (77 pages) describes the qualitative disturbances of protein metabolism, while Part V (38 pages) describes the morbid states induced by disturbances of the water and mineral economy.

Students interested in the historical development of our knowledge of diabetes mellitus should welcome the appearance of this book because of the copious references to the pertinent literature supplied as footnotes to the text. Incidentally, it may be remarked that the author's attitude toward this subject appears to be a fairly judicial one, although, on the whole, the contributions of American workers seem to have been accorded a rather scanty measure of recognition. Undoubtedly, however, the chief value of the book lies in the fact that it is concerned primarily with practical questions of treatment. And since the volume fulfills this purpose satisfactorily, it can be recommended without reserve, particularly to physicians interested in the treatment of diabetes mellitus.

A Textbook of Medicine. By American Authors. Edited by Russell L. Cecil. Third edition. Pp. 1664. Illustrated. Philadelphia and London: W. B. Saunders Company. 1933. Price, \$9.

The present, third, edition of this ready reference work on the practice of medicine is a compact, carefully edited volume of 1664 pages. On comparing its contents with those of the preceding issue, one notes that the scope of the book has been considerably enlarged, recent advances made in internal medicine having necessitated the re-writing of many of the chapters and the inclusion of a number of new subjects. This new material includes short articles on plague, kala-azar, psittacosis, rat-bite fever, pertussis, the erythemas, poisoning by radioactive substances, diseases of the bronchi, hypotension, diabetes mellitus, diseases of the parathyroids, diseases of the suprenal system, and diseases of the pituitary body. Considerable space is devoted also to a consideration of the neuroses.

Because of the great mass of useful information it contains and the brief, authoritative manner in which each subject is presented, this volume is admirably adapted to meet the needs of everyday practice. Other commendable features are that the book itself is attractive in appearance and that its moderate price places it within the reach of every physician.

CALIFORNIA BOARD OF MEDICAL EXAMINERS

(Continued from Text Page 216)

the College of Physicians and Surgeons, dental department, San Francisco, it was learned that last year he assertedly robbed a dental college in Houston, Texas, of twenty-one microscopes, which he was said to have disposed of in Fort Worth, Oklahoma City, and Denver; that he later burglarized the Braun Company of Los Angeles of twenty microscopes, which he disposed of in Sacramento, San Francisco, Portland, and Seattle. After his plea of guilty in the San Francisco Superior Court, he had the temerity to ask for probation.

Assertedly using the alias of Doctor Crawford and driving a pretentious automobile with a 1934 California license plate, an individual identified as E. K. Osmun again started his former "racket" by calling on several licensed physicians in Napa, Sacramento, Colfax, etc., attempting to pick up some small change by offering to make insurance examinations of those on whom he called. The photograph of Osmun was identified by a Napa doctor as the individual (using the name of Muhlberg) to whom said doctor gave a \$5 check after he had listened to the sales talk of this individual. Officers report that "Doctor Crawford," identified as E. K. Osmun, recently arrested by the sheriff of San Andreas, was returned to Ventura, where he was wanted in connection with his "racket." (Prior entries, December, 1931; January, 1933.)

On January 25, 1934, John Curtiss pleaded guilty in Los Angeles to a violation of the Medical Practice Act and was sentenced to pay a fine of \$600 or serve three hundred days in the city jail.

(Continued on Page 14)



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(Continued from Page 12)

Paul Hellwig on February 5, 1934, pleaded guilty in Los Angeles to a violation of the Medical Practice Act and was given a five-day jail sentence, suspended.

On February 5, 1934, Paul Kalman pleaded guilty in the Municipal Court of Los Angeles to a charge of violation of the Medical Practice Act and was given a five-day suspended sentence.

On January 16, 1934, Mrs. E. L. Newlin pleaded guilty in the Municipal Court of Los Angeles to a charge of violation of the Medical Practice Act and was sentenced to serve sixty days in the city jail, suspended two years on condition that she obey the law.

W. H. Park on January 16 pleaded guilty in the Municipal Court of Los Angeles to a charge of violation of the Medical Practice Act and was given a sixty-day jail sentence, suspended two years on condition of no further violation.

J. S. Sanders on January 29 pleaded guilty in the Justice Court of Santa Monica to a charge of violation of the Medical Practice Act and was sentenced to sixty days in the county jail, suspended for six months on condition of no further violation.

"Appeal from the Santa Clara County Superior Court decision, which enjoined chiropractors from

practicing the various forms of therapy, will be made by the Associated Chiropractors of California, Harry G. Henderson, attorney for the group, said today. . . . The controversy between what are known as the 'straight' chiropractors and the 'mixers' is based on the use by the 'mixers' of therapeutic devices. The 'straights' insist that the practice of chiropractic should be confined to the 'manipulation of the vertebrae of the human spine with the fingers.'" (Oakland *Tribune*, January 28, 1934.)

"Following charges that he practiced medicine without a state license and sold remedies which did not react as advertised, 'Dr.' Edmund N. A. Kratzer, Long Beach, was found guilty in Justice Court yesterday. . . . Deputy District Attorney James Davis said that Kratzer used the title of 'Dr.', represented himself as being able to cure the plaintiff and that the contents of medicine bottles purchased for \$35 made her sick." . . . (Santa Ana *Register*, January 19, 1934.) The transcript of the hearing, which resulted in the revocation of the license of J. Lafayette Berry, mentions that N. A. Kratzer was then connected with Berry in running a traveling medicine show under the name of "Bloodless Berry."

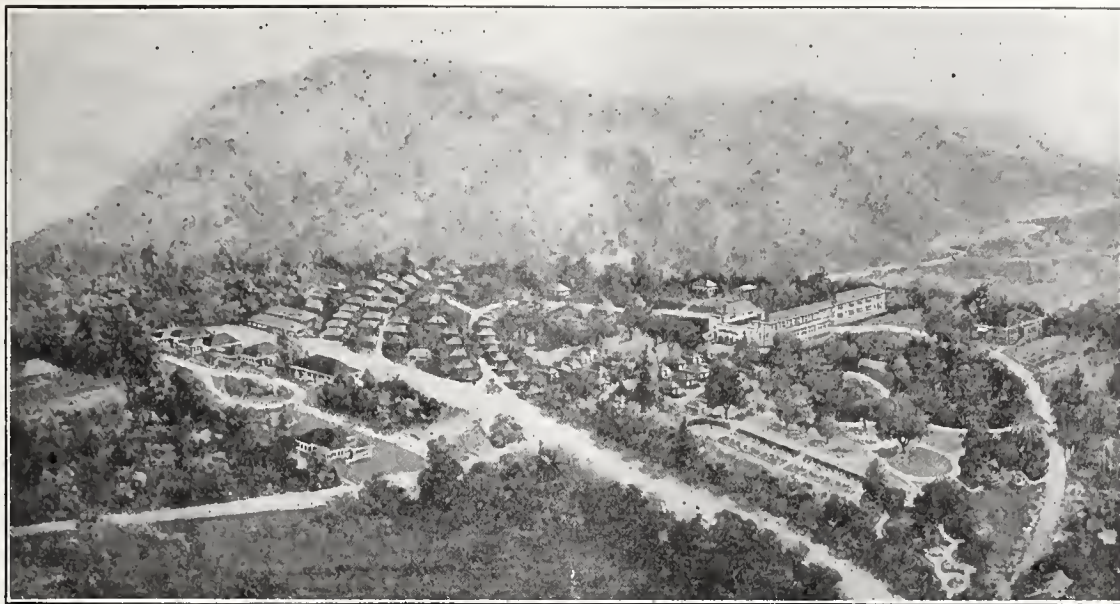
"Dr. Samuel D. Burgeson, a prominent East Side physician and former police surgeon in the Boyle Heights station, was arrested today by federal officers on a secret indictment returned last Wednesday, charging him with the sale of narcotics. The indictment, which contains six counts, charged the physician with the sale of large quantities of narcotic drugs to Edward Wood. Anonymously tipped off that Doctor Burgeson was trafficking in narcotics, federal agents lay in wait near his office and arrested Wood as he left the premises. A search of his person revealed a quantity of narcotics. Burgeson's bond was

(Continued on Page 17)

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(Continued from Page 14)

fixed at \$5,000, which he was preparing to post, pending the arraignment in Federal Court." (Los Angeles *Post-Record*, February 9, 1934.)

"Dr. George Dewees, thirty-eight, Fresno physician, was given a thirty-day suspended jail sentence for drunkenness by Judge J. S. Clack. He was arrested by Constable R. B. Abbott." (Fresno *Bee-Republican*, February 8, 1934.) (Previous entries, August and November, 1933.)

"Climaxing more than five months' investigation, Dr. L. D. Cruice, prominent San Diego physician, was arrested today on a federal indictment, charging violation of the narcotic laws. . . . The indictment was returned by the Federal Grand Jury at Los Angeles recently after John Denison, Federal Narcotic Agent, had presented results of his investigation before the inquisitorial body. Denison, working in conjunction with Benjamin Eichbaum of the local Police Department, said he had obtained more than one hundred fictitious cocaine prescriptions, which Cruice had issued during the past six months. . . ." (San Diego *Tribune*, February 3, 1934.)

Proposed Federal Birth Control Legislation.—Physicians and medical societies throughout the United States, no matter which side they take on such a highly controversial subject, are watching with interest proposed legislation before the Seventy-third Congress calling for amendment of the present federal birth control laws. These amendments, commonly known as the "Doctors Only" bills are Senate Bill

1842, sponsored by Senator D. O. Hastings of Delaware, and House Bill No. 5978, introduced by Representative Walter Pierce of Oregon.

This proposed legislation would amend the existing federal restrictions so as to legalize the sending or receiving of contraceptive information, instruments, and medicines between physicians and their patients, medical colleges and hospitals, and from physician supply houses and manufacturers.

Under the present statutes, penalties of heavy fines and imprisonment may be inflicted for transporting any article intended for the prevention of conception or for receiving for distribution to others any such article that has been transported interstate or by the Government mails. For several years there has been a controversy as to the propriety of the present federal legislation, as there are many who contend that the Constitution does not grant the power to law to abridge the right of the physician to protect the life and health of his friends and patients.

The sponsors of the "Doctors Only" bills merely seek to place the responsibility for prescribing contraceptive action where it rightfully belongs—in the hands of the medical fraternity.

Leading doctors also contend that this change in the statutes will greatly aid in the proper care of cardiac, tubercular and diabetic patients where pregnancy is contraindicated and where conception would necessitate a therapeutic curement.

The far-reaching importance of these bills is daily becoming more apparent to American physicians. The passage of these laws will depend largely upon the expressions received from the physicians, and there is yet time to express such views to their Congressman or the Senator and Representative mentioned above who are sponsoring these bills to amend the present laws for the interest and protection of the medical profession.



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Standards for Nursing Care Under F. E. R. A.—The state administrator of emergency relief recently requested the California State Organization for Public Health Nursing to assist in drafting general suggestions for nursing care to be given to the unemployed in their homes, which is a part of the general plan for medical care. Mrs. Helen D. Halvorsen, R. N., president of the organization, has announced the standards which have been approved by the state administrator. Since the program provides for service through the local public health agency, it is a matter of interest to all health officers.

Following are the standards for nursing care in the home under the F. E. R. A., as accepted by the state administrator for California:

1. Only graduate registered nurses of good professional standing shall be employed.

2. An effort shall be made to secure nurses who meet the employment requirements of the supervising agency. When no such standard exists, the California public health nurse certificate shall be desirable.

3. Provisions for nursing service shall be through the local public health agency which is already offering bedside service on a pay basis. When there is no such agency, nurses in local health departments, boards of education, Red Cross public health nursing services, and Metropolitan Life Insurance nursing service may be used in a supervisory capacity to assist in developing a bedside service.

4. All nursing service should be under nursing supervision. The State Organization for Public Health Nursing has set up an advisory committee in the north and south to coöperate with local organizations.

5. Authorization for nursing service shall be given only upon the recommendation of the attending physician and shall be made on the usual order forms, and the number of visits indicated by the physician.

6. All nursing care shall be under the direction of the attending physician. Orders from the physician shall be in writing.

7. The nurse shall keep such records as are required by the F. E. R. A. and the supervising organization.

8. (a) The maximum rate for a nursing visit shall be \$1 per visit. (b) The maximum rate for out-of-town care shall be \$1.25, plus mileage transportation at the rate of six cents per mile. (c) Where nursing care is needed on more than a visit basis, the agency supplying the service on the visit basis shall call upon the local official registry to supply personnel at the prevailing rate for such service.—*Weekly Bulletin, California Department of Public Health.*

Merck Institute.—The Merck Institute of Therapeutic Research, Rahway, New Jersey, announces the appointment of Dr. Eugene Maier as chief bacteriologist.

Doctor Maier is a graduate of the University of Tuebingen, Wuertemberg, Germany, and completed his studies at the University of Erlangen, Germany.

Doctor Maier was associated with the Rockefeller Institute of New York as research assistant from 1926 to 1930. Since 1931, up to the time of becoming associated with Merck & Co., Inc., Doctor Maier has been at Bellevue Hospital, New York, in the department of pathology, as bacteriologist for the Tuberculosis Division of Columbia University.

Enrollment in Health Conservation Contest Completed.—Nearly thirty western cities have entered the Inter-Chamber Health Contest for 1933. This contest is sponsored by the United States Chamber of Commerce and the American Public Health Association. Western cities have taken active parts in these contests since they were inaugurated several years ago. More western cities, in fact, have enrolled in previous contests than have cities in the other parts of the country.

Interest in the 1933 contest becomes intensified through the offer of the American Public Health Association.

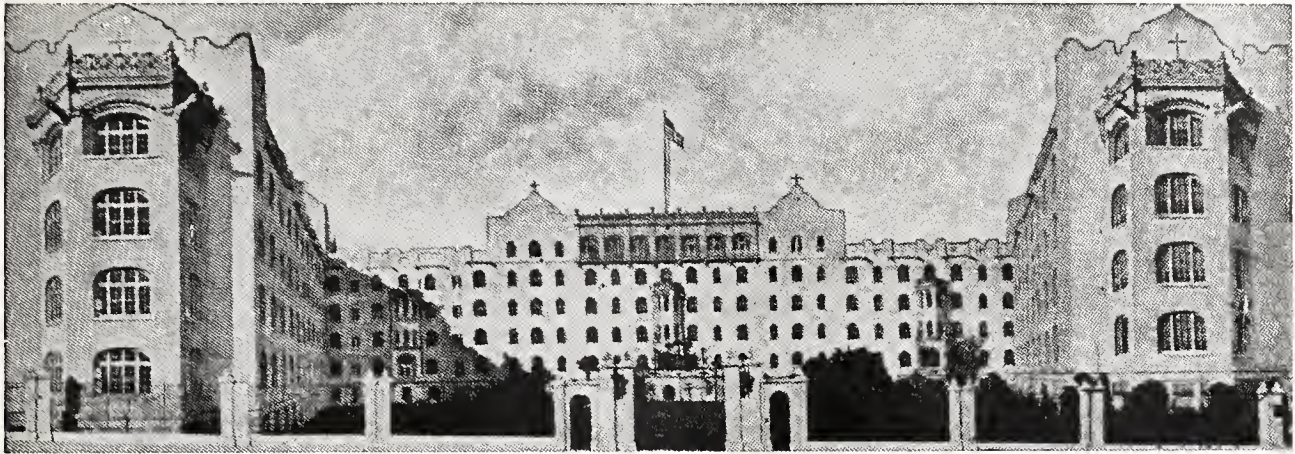
(Continued on Page 21)

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(Continued from Page 18)

sociation to make a free survey of the public health work of one of the cities competing in the contest. The fortunate city, to be selected by the grading committee for the survey, will receive:

1. A complete stock-taking of the health facilities of the city.
2. A careful analysis and evaluation of the health services rendered.
3. A report covering the findings, with recommendations for future work and facilities.

If a city desires to be considered for this service, the Public Health Committee of its local Chamber of Commerce should first secure the approval of the health officer. It should then make a formal request for a free survey, which should be submitted with the fact-finding schedule to the insurance department of the Chamber of Commerce of the United States not later than March 1, 1934. This request should be supported by at least three reasons why the committee feels that its community would benefit by such a survey.

After the winning and honorable mention cities have been selected by the grading committee (on the basis of the fact-finding schedule submitted), the city to receive the survey will be chosen. The winning of first award or honorable mention will automatically eliminate cities from consideration for the survey. The selection of the survey city will be based upon the requests received and their supporting reasons, and also upon the information submitted in the fact-finding schedule. It is assumed that, in so far as is possible, every effort will be made by the selected city to use the findings of the survey to promote better local health conditions.

Last year five Pacific Coast cities won awards in the inter-chamber contest. Lodi won first award among cities of its population classification. Pasadena and Palo Alto have won several certificates of award in

past contests. Last year Santa Barbara, Santa Ana, Pasadena and Palo Alto, all won certificates.—*Weekly Bulletin, California Department of Public Health.*

Milbank Memorial Fund Reports on Birth Control.—

Efforts of couples to limit the size of their families by ordinary preventive methods, without special medical instructions in their use, are about 75 per cent effective during the time these methods are used, according to the report of an investigation by Regine K. Stix, M.D., and Frank W. Notestein, of the Milbank Memorial Fund, in the current issue of the foundation's quarterly.

An important finding of the investigation was that the preventive methods, various in kind, did not in any way lower the capacity for motherhood when this was desired. The number of births averaged 2.26 for an average of less than ten years of married life.

The records for this study were obtained from 714 women living in the Borough of the Bronx, New York, selected because they had come to a birth control clinic for advice. Each woman was interviewed by Doctor Stix on her experience with "untutored efforts" at family limitation before her first contact with the clinic. The analysis covers only the pre-clinical period in each case, which ended in 1931. Careful statistical allowances were made for all factors of time and marital life, and the results indicated an effectiveness of 75 per cent of control for the time when tried.

About 97 per cent of these women had made some effort to limit their families before attending the clinic. Of these, more than half did not try to limit their families until after they had had at least one child.

The families studied had a median income of \$2,300 in 1929 and of \$1,200 in 1932. About one-fifth of the families were destitute or supported by organized relief in 1932.

(Continued on Next Page)

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(Continued from Preceding Page)

This investigation, sponsored by the Milbank Memorial Fund, is one of a series of studies on population problems, which have for their purpose the assembling of scientific knowledge regarding the effect on the birth rate of such factors as race-stock, education, income, and the spacing of children. Among these studies is one directed by Dr. Raymond Pearl, of the Johns Hopkins University, on the prevalence and effectiveness of preventive methods in family limitation. Doctor Pearl obtained his data in coöperation with physicians in 131 hospitals located east of the Mississippi River.

How to Give Cod-Liver Oil.—What every woman doesn't know is that psychology is more important than flavoring in persuading children to take cod-liver oil. Some mothers fail to realize, so great is their own distaste for cod-liver oil, that most babies will not only take the oil if properly given, but will actually enjoy it. Proof of this is seen in orphanages and pediatric hospitals where cod-liver oil is administered as a food in a matter of fact manner, with the result that refusals are rarely encountered.

The mother who wrinkles her nose and "makes a face" of disgust as she measures out cod-liver oil is almost certain to set the pattern for similar behavior on the part of her baby.

Most babies can be taught to take the pure oil if, as Eliot points out, the mother looks on it with favor and no unpleasant associations are attached to it. If the mother herself takes some of the oil, the child is further encouraged.

The dose of cod-liver oil may be followed by orange juice, but if administered at an early age, usually no vehicle is required. The oil should not be mixed with the milk or the cereal feeding unless allowance is made for the oil which clings to the bottle or the bowl.

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ance the former has an advantage, since it can be given in one-third to one-half the usual cod-liver oil dosage.

The Control of Scarlet Fever.—Dr. J. D. Dunshee, city health officer of Pasadena, recommends the use of serum, or whole blood, from the parents of children who show reactions in tests for scarlet fever immunity when parents are shown by Dick tests to possess immunity. This recommendation is based upon serum sickness in more than 15 per cent of a group of children in an institution to whom the scarlet fever antitoxin had been administered. These cases occurred during the first week after the administration of the serum. Doctor Dunshee's report on scarlet fever control, as published in the *Health Index and News* of the Pasadena Health Department for December, follows:

“Control measures in scarlet fever have been inadequate and modern methods which might be of assistance have been somewhat impracticable because of expense involved. Within the past two years the quarantine period of twenty-eight days imposed by state law was reduced to twenty-one days. This applies to uncomplicated cases. Scarlet fever has had an increased prevalence during this period, but we feel that the reduction of the quarantine period was justifiable inasmuch as the average case has been shown to become noninfectious within that period.

“The difficulty in control of scarlet fever, in our opinion, is not enhanced by increasing the time of quarantine. We believe the period of greatest danger is before the establishment of quarantine, through carriers and “mild” or “missed” cases. We have confirmed this belief to our satisfaction through the culturing of many hundreds of contacts who showed no evidence of the disease. We suggest, therefore, that greater care be exercised by physicians and through instruction to families in isolating every illness until its nature has been fully determined.

“Recently we had an outbreak of scarlet fever in an institution containing forty-seven children. The health officer Dick-tested every person in the institution and found a positive test in 75 per cent of the inmates. These were passively immunized with scarlet fever antitoxin and those free from the clinical disease were released from quarantine at the end of seven days. An exception was made in the case of three children giving positive culture of hemolytic streptococci. They will be kept in isolation until their throats are clear. To date, after a period of two weeks, no new cases have developed. All cases in the institution had their throats cultured as a control measure. This is obviously a procedure which is too expensive under average conditions and with the present health department budget, but shows what may be done in such cases. A period of two weeks has elapsed since the administration of serum to these children. In the second week, out of thirty-nine cases injected six have had a rather severe serum sickness. I would recommend serum or whole blood from the parents in preference to antitoxin where parents are shown by the Dick test to have immunity.—*Weekly Bulletin, California Department of Public Health.*

Methods in Rat Control.—In many California communities at the present time, CWA funds have been made available through which the employment of emergency employees in public health departments is made possible. Many of the temporary workers are engaged in rodent control activities. For the benefit of those who are engaged in these projects a brief résumé of rat-control measures is published herewith.

While the rat-proofing of buildings is of first importance in the permanent exclusion of rats, there are many other measures that are made necessary in the control of these rodents. These involve poisoning, trapping, removal of rat food supplies, and the de-

(Continued on Next Page)

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struction of harboring places. Rat-proofing of buildings, in itself, constitutes a subject for separate discussion. The four measures above mentioned will be discussed only in this article.

Poisoning.—Poisoning and trapping reduce the number of rats, but do not eliminate them. Both are of value in ridding large rat-proof structures of contained rats which, finding harbor and sustenance therein, might otherwise perpetuate themselves. Poisoning is of great value in the destruction of rats on roofs and in localities such as freight and storage depots, freight yards, garbage dumps, and water fronts. One of the chief dangers in the use of poisons lies in the fact that many of them are injurious to domestic animals and to children. Phosphorous and arsenic are often used for the destruction of rats.

Red squill has come into great favor recently for this purpose and it has the decided advantage in that it is not harmful to domestic animals nor to children. Squill is a perennial bulb that grows wild along the coast of the Mediterranean. The bulbs are generally gathered during the dormant period in summer and early fall and are made into a dry powder which is mixed with foods for rat bait. The United States Department of Agriculture says that rats usually take red squill readily and that it approaches the unique position of being a poison specific to rats. The poison has an acrid taste which is objectionable to most animals, and it generally acts as an emetic when taken in quantities. A variety of three or more kinds of baits greatly increases the chances for a thorough clean-up of rats on any premises. Separate baits from three of the following classes should be prepared carefully, according to the United States Department of Agriculture.

Fish.—Fresh fish, ground in a meat chopper, is one of the most attractive baits for rats. If fresh fish is not available, a cheap grade of canned salmon, canned mackerel, or sardines in oil may be used. Mix one

ounce of powdered red squill with a little water to form a thin paste free of lumps, add to one pound of fish, and mix thoroughly.

Meat.—Mix one ounce of powdered red squill with a little water to form a thin paste free of lumps, add to one pound of fresh ground meat, and mix thoroughly. Hamburg steak is most commonly used.

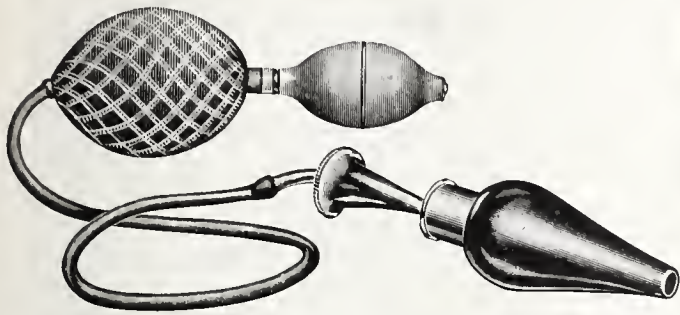
Cereals.—Mix together, dry, one ounce of powdered red squill to one pound of cereal meal, such as oatmeal, graham flour, cornmeal, or bran. Add one pint of sweet milk or water and stir to a mushy consistency.

Fruits and Vegetables.—Using a pepper shaker, dust powdered red squill over thin slices of fresh fruit or vegetables and stir or shake as the powder is applied, to insure even distribution. A small muskmelon, for example, should be cut into about sixteen slices and each slice cut into three sections. This will require an ounce of powdered squill and will make forty-eight baits. Three medium-sized tomatoes or three bananas, each cut into about sixteen sections, may be similarly used for each ounce of squill powder.

Liquid red squill should be used only with a dry bait capable of absorbing about double its weight of liquid. Cut one-half pound of stale bread into half-inch cubes, place in a clean dish, and pour one pint of liquid red squill over them and mix gently with a spoon. Use several cubes for each rat bait.

Trapping.—Snap traps, because of their small size and adaptability, will be found most satisfactory for general use. They should be obtained with strong hardwood bases, all springs and wires being securely fastened to this base. The efficiency of such traps is increased when provided with a double-acting trigger release, with hooks for attaching bait. They should be placed where they will interrupt the runways of rats—under floors, above ceilings, within walls, and on girders, cross-beams, ledges, etc. They should be securely anchored with a small piece of twine. Smoking is not essential.

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Cage traps are of especial value in sewers, but may be employed in any position affording sufficient room. They may be covered with loose sacking or other material or left bare. Such traps should be about twenty inches long, with underbraces wired and the release pedal ledged. Mice can pass between the wires of cage rat traps, so that these traps when set may serve to supply mice with food. Cage-trapped rats should be chloroformed.

Removal of Rat Food.—By rat food is meant waste food or food refuse, such as is thrown carelessly on vacant lots, or around garbage cans, or into imperfect garbage cans, or surplus food thrown to chickens or dropped in transportation or handling.

The imperfect garbage can represents the most important source of rat food outside the building, and its contents provide amply for rat sustenance. Aside from other sanitary objections, the elimination of the rat cannot be accomplished until the imperfect garbage can has been replaced. The installation of a perfect garbage can is a civic necessity—a debt due the community by every householder, and this debt should be promptly paid.

Chicken yards offer a convenient source of rat food and should be rat-proofed or abandoned. Rat-proofing may be accomplished by constructing a coop or inclosure with an area wall as described for frame structures, the ground area being covered with three inches of concrete and the side walls above the foundation constructed of wire cloth not less than twenty gauge nor greater than one-half inch mesh. This should extend upward at least six feet. The door provided should be rat-proof and remain closed when not in use. Chickens may range in the open yard, but should be fed only within the rat-proof coop.

Removal of Rat Harbors.—The removal of rubbish, dilapidated outbuildings, trash, and similar material, is of importance in rat control. Rats are found commonly in such harboring places, and their removal con-

(Continued on Next Page)



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(Continued from Preceding Page)

stitutes an important factor. Wooden floors, whether covering sidewalks or passage areas, if lying in close proximity to the ground, offer a most convenient harboring place for rats. Such wooden floors should be removed and the ground area left bare or covered with gravel or cement.—*Weekly Bulletin, California Department of Public Health.*

The Conquest of Typhoid Fever.—The successful warfare that has been carried on against typhoid fever during the past twenty-five years has resulted in a remarkable decrease in the incidence of the disease. Until recent years epidemics, involving large numbers of people, occurred with considerable regularity. Water-borne typhoid fever outbreaks, with their distinguishing characteristics, were fairly common. In some cities where water supplies came from untreated surface streams, an annual toll in typhoid illness and mortality was accepted with about the same degree of complacency that the annual tax levy is received. It was regarded as more or less inevitable. Explosive outbreaks, due to infected milk supplies, still occur occasionally, but not often.

Typhoid epidemics recently have shown tendencies to depart somewhat from the classical type of epidemic that has been encountered during past decades. It is far more difficult to find the source of most typhoid fever outbreaks that occur today and there are undoubtedly well founded reasons for it. Food supplies, such as milk and vegetables, used to come from single sources in the immediate vicinity of the community. At the present time such supplies come from a large number of different sources and they may be transported over half the length of the state. Transportation by truck has facilitated the movement of such food supplies to central markets in metropolitan areas.

(Continued on Page 28)

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(Continued from Page 26)

Furthermore, the change in systems of retail merchandising has changed the purchasing habits of the housewife, particularly in the large cities. Household purchases of food supplies which were formerly made in one or two stores are now made in many different stores and markets. The housewife is inclined to "shop" and to make purchases where the best bargains are offered. This makes it difficult to secure histories of purchases of food supplies and thus renders it extremely difficult for the epidemiologist to trace the source of a supply that is suspected of contamination. It is generally accepted, also, that there are at the present time more typhoid carriers at large and not under control than is realized generally.

Because typhoid fever has been reduced greatly in its prevalence, many people have arrived at the opinion that it is not worthy of serious consideration. Nothing could be more fallacious. Eternal vigilance is essential in the provisions of safeguards against intestinal-borne infections. Foods must always be produced under the most scrupulous sanitary methods if diseases of this type are to be kept under control. The present complex organization of food sales makes it difficult to be sure always, in all places, of the standards under which they are produced. The way of the epidemiologist who investigates typhoid fever out-

breaks under these conditions is not easy. Proper sanitation of foodstuffs of all sorts becomes a matter of paramount importance. There should be adequate safeguards against the consumption of any contaminated products at all times and in all places.—*Weekly Bulletin, California Department of Public Health.*

California Industrial Accident Commission.—Excerpts from report to Governor's Council follow:

At the beginning of the year the number of insurance carriers and self-insurers going into the hands of receivers was alarming, but everyone gives thanks that the uptrend is at hand, since only one minor company during the past several months was forced into a receivership.

Many of the companies operated by receivers have paid their claims in full, and the Richfield Oil Company, a self-insurer in receivership, has paid 100 per cent of its compensation losses.

Three decisions rendered by District Courts of Appeal during the past month are of interest. In the case of *California Casualty Indemnity Exchange vs. Industrial Accident Commission and McDonald*, Fourth Civil 1083, the facts were as follows: The employee was injured while engaged as a quarryman; his wages

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varied between \$5 and \$6.50 a day. He had worked only forty-four days for this employer at the time of injury, but he had worked for other employers during the preceding year at a rate from \$4 to \$5 a day, earning from other sources during the year \$442. The Commission found his average earnings to be \$5.50 a day for employment five and one-half days a week, and based this finding upon Section 12 (a) (4) of the Workmen's Compensation Act. The court, in approving the average earnings as found by the Commission, stated in its opinion that the employee was not to be penalized because he had been unable to secure continuous employment throughout the entire year, and further stated that the practice of insurance carriers in arriving at average earnings, namely, of dividing the actual earnings for the year preceding the injury by 52 (*i. e.*, the number of weeks in the year) was not to be sanctioned in such cases.

In the case of *Baker vs. Industrial Accident Commission, Long-Turner Corporation, et al.*, Second Civil 9212, Baker, the employee, sustained a hand injury which hospitalized him for six weeks, with subsequent convalescent treatment for four months. Thereafter he returned to work and at the end of eight months quit his employment. Thirteen months after the injury pulmonary tuberculosis was suspected and this was ultimately definitely diagnosed. Three years after the injury the employee died from tuberculosis. The attending physician testified as his opinion that the lowered resistance of the employee, caused by the original injury, lighted up the latent tuberculosis, ultimately causing his death. The Court of Appeal reversed the Commission's decision, which denied compensation, on the ground that there was no real conflict in the evidence, since the insurance carrier did not offer any testimony to contradict the showing made by the witnesses for the deceased.

In *Daugherty vs. Industrial Accident Commission et al.*, Second Civil No. 9328, the facts were: An employee of an oil company was seen by a witness some dis-

tance away to arrive at the third to the last step of stairs and he seemed to stumble and fall. Eight months thereafter he died. The medical experts in the case were of the opinion that because of a pre-existing brain lesion, he slumped and fell rather than tripped. The Court of Appeal held that the best evidence in the case was that given by the witness who testified that he seemed to stumble and fall, and reversed the Commission's decision on the ground that the expert medical witnesses who testified were not given the true facts.

Spray Residue Tolerances for 1934 Crop.—A tolerance for lead that may be present as spray residue on fruit to be harvested in 1934 was announced, December 11, 1933, by the Acting Secretary of Agriculture. Action under the Federal Food and Drugs Act will be taken against all shipments of fruit that contain in excess of 0.019 grain of lead per pound.

The tolerance of 0.01 grain per pound previously set for fluorin and for arsenic will remain in force for the 1934 crop.

The text of the official notice follows:

"In the Department's announcement of June 20, 1933, a lead tolerance of 0.014 was forecast for the 1934 season. In the absence of a commercially feasible lead arsenate substitute it is evidence that despite the most effective washing method a material amount of fruit will not meet the tolerance of 0.014 grain lead per pound. Accordingly, a tolerance of 0.019 grain lead per pound of fruit is announced for the 1934 crop. It is hoped that by the end of the 1934 season the various lines of research now under way will enable the industry to meet a tolerance of 0.014 grain per pound the following year and, perhaps, to eliminate lead entirely as is now being done in vegetables.

"There are no indications of any additional knowledge on the toxicity of fluorin which call for a change

(Continued on Next Page)

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(Continued from Preceding Page)

in the tolerance of 0.01 grain per pound announced June 20, 1933. Present indications are that fluorin is not as easily removed as was earlier thought to be the case.

"The tolerance for arsenic will remain at 0.01 grain arsenious oxid per pound of fruit.

Common Interests Between the Control of Tuberculosis and Syphilis.—Many striking similarities between tuberculosis and syphilis were pointed out by Thomas Parran, Jr., M. D., state commissioner of health, in a paper presented at the twenty-fifth anniversary celebration of the Campaign Against Tuberculosis, State Committee on Tuberculosis and Public Health, and published recently in *Hospital Social Service*, 28:575, 1933. These likenesses are apparent in the social and

economic fields, in the scientific aspects of the two diseases, and in the practical methods of control.

Social Aspects.—From a social standpoint, each disease is a great antisocial factor, a disrupter of family life—tuberculosis because it so frequently takes by death a parent, syphilis because so frequently the disease itself is a cause of family disruption.

Likewise, each has a significant effect on child life—syphilis because of the congenital form of the disease, tuberculosis because of the opportunity of infection where one of the parents is a sufferer.

Each disease is related similarly to the problems of dependency—dependent children result from disruption of family life.

Each disease attacks those in the most useful period of life. It is the young adult who is peculiarly susceptible both to tuberculosis and to syphilis.

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Each disease has a certain social stigma attached to it. That has largely disappeared in regard to tuberculosis and is beginning to disappear somewhat as regards syphilis.

The ravages of each disease are greatest in the lower economic strata of society.

Economic Aspects.—From an economic standpoint, each disease is very costly to the community—tuberculosis because it takes the young wage-earner or the young mother, leaving dependent children; syphilis not because it so much disables the person in the early stages of the disease, but because the many complications and end-results necessitate public care for the person affected.

Scientific Aspects.—Scientifically the similarity between these two diseases is even greater. Each is a chronic infection. Each has an insidious onset. Each needs for its control early diagnosis. Neither syphilis nor tuberculosis disables the person very much during the first stages. Some of the later symptoms of each are quite comparable; certain lesions of syphilis under a microscope look very much like the chronic inflammations of tuberculosis, and in each disease the patient is liable to have relapses which often occur after quiescent or latent periods.

Control Measures.—In each disease there is great necessity not only for early diagnosis but for good

medical care. In both, a competent medical profession and active coöperation between the health forces and the medical forces are essential for their control.

From a public health standpoint, each is a family disease to which epidemiological methods may be applied. Each case of tuberculosis comes from another case. Likewise, each case of syphilis, in a different way, comes from another. Epidemiologically it is much easier to trace the source of infection in syphilis than in tuberculosis.

Dissimilarities.—In tuberculosis the infection is widespread in the population. A great many persons are infected and harbor organisms in their bodies although they do not develop the disease. The tuberculosis bacillus lives a long time outside the body. In syphilis, on the other hand, the disease is caused by a delicate organism that does not exist any length of time outside the body and which must be passed directly from person to person in order to spread infection. The organism is not so widely disseminated.

Tuberculosis is comparatively difficult to detect and requires expensive, careful examination. Syphilis is much easier to detect.

In syphilis, there are remedies which will speedily sterilize the infectious case. This is not possible in tuberculosis. If syphilis is treated early, it is possible

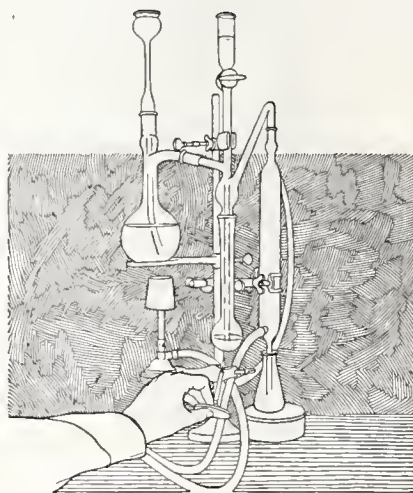
(Continued in rear advertising section, Page 35)

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No. 3

THE CAROTID SINUS—ITS CONTROLLING INFLUENCE ON THE CIRCULATION AND RESPIRATION *

By PROFESSOR LUCIEN DAUTREBANDE, Ph. D., M. D.
Liège, Belgium

THE functional importance of the carotid sinus has been recognized since the discoveries of Hering. It is known to govern reflexly a number of respiratory and circulatory phenomena.

The carotid sinus has been admirably studied anatomically by Castro. The anatomical arrangement may be seen from the diagram in Figure 1. The intercarotid nerve terminates as (1) nerve endings, which Castro calls the "glomus caroticum," and which is commonly, though incorrectly, called the "carotid ganglion," and (2) sensory fibers in the bulb of the internal carotid and the entire region of the carotid bifurcations.

When reunited, these two groups of fibers form the nerve of Hering, which then joins the glossopharyngeal. Certain nerve fibers, which join the vagus ganglion instead of the glossopharyngeal, have been omitted from the diagram. The carotid nerve, or nerve of Hering, therefore, possesses two regions of peripheral perception: one in the arterial walls of the carotid bifurcation, and the other in the glomus caroticum (carotid ganglion). The so-called carotid ganglion is essentially composed of sensory nerve endings and not, as its name would imply, of a relay synapse.

The researches of Hering, C. Heymans, Koch, and their collaborators have demonstrated the part played by variations of the intrasinus pressure in the regulation of the general blood pressure. A hypertension in this region produces a general somatic hypotension with bradycardia, while a reduction of the intracarotid pressure results in general hypertension by means of peripheral vasoconstriction, and in tachycardia. Hering has shown that occlusion of the two common carotids causes a great increase in pulse rate and a marked rise of arterial pressure. On the other hand, when the carotids are reopened and the blood-flow through

them is increased, the heart is markedly slowed and the arterial pressure returns to the normal level.

Denervation of the carotid sinus, together with section of the depressor nerves of Cyon, which possess a similar action, produces most of the phenomena of intrasinus hypotension and results in prolonged arterial hypertension. The increase in blood pressure persists as long as the carotids remain closed. The blood pressure returns to its original level only when the carotids are again opened. Tachycardia is marked during the hypertension and groups of extra systoles are common.

The peripheral vasoconstriction may be revealed in different ways. The simplest method of demonstrating it is by means of a spleen oncometer, and noting the changes in volume which follow occlusion of the carotid arteries. When the carotids are closed, the spleen contracts markedly in spite of the increase in blood pressure. The splenic volume returns to the original when the carotids are opened and the general blood pressure falls to its initial level.

The terminations of the nerve of Hering in the sinus are extremely sensitive to pressure. This can be demonstrated by varying the pressure on a fluid bathing the endings of the nerve, and noting changes in the blood pressure recorded from the femoral artery. An increase in sinus pressure causes a fall of blood pressure, and a decrease in sinus pressure is followed immediately by a marked rise in blood pressure.

If now, instead of reducing the pressure inside the sinus, the two carotid sinuses are denervated by section of both the nerves of Hering, the general blood pressure rises instantly. Under these conditions the animal becomes definitely hypertensive (Koch). Similar results can be obtained in animals which have recovered from the operation for denervation. If, in addition, the depressor nerves are severed in such animals, the general arterial pressure remains elevated afterward. At the same time the heart rate is accelerated, sometimes attaining a rate of 250 per minute.

Therefore, it may be concluded that in the terminations of the nerves of Cyon and of Hering there

* From the Institute of Experimental Therapeutics, University of Liège, Liège, Belgium.

* Address delivered at the Stanford University School of Medicine, San Francisco, January 8, 1934.

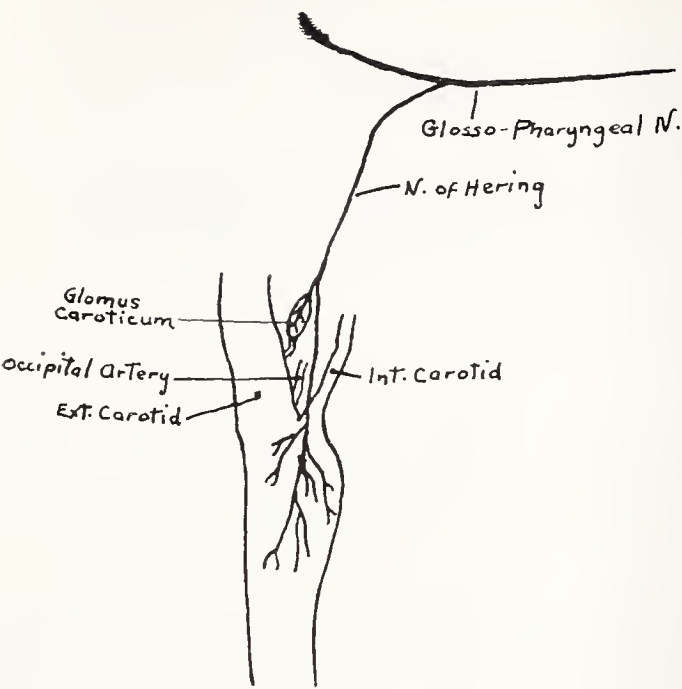


Fig. 1.—Diagram of carotid sinus and innervation.

are areas which constantly control the general blood pressure. Section of these nerves removes the depressor control, and puts the organism in a state of chronic hypertension and of definite tachycardia.

Not only are the blood pressure, the vasomotor center, and the cardiomoderator center affected by every change of pressure within the sinus, but the respiratory center is also affected. The respiration is increased, both in amplitude and in frequency, simultaneously with the increase in the general blood pressure. Section of the nerves of Cyon and denervation of the carotid sinuses appear equally important for abolishing a permanent inhibitory influence on the respiratory center by removing the depressor tonus of the sensitive areas. For, after section of these nerves, the respiration increases considerably in rate and amplitude. Hence, modifications of the intrasinus pressure may lead to profound changes in the pulmonary ventilation. Occlusion of the carotid arteries provokes a reduction of the intrasinus pressure and so causes a marked increase in the pulmonary ventilation, which disappears when the carotids are again opened. On the other hand, after denervating the sinus, modifications of pressure in the sinus have no effect on the pulmonary ventilation. These responses of the pulmonary ventilation to variations in the intrasinus pressure naturally cause parallel changes in the exhaled carbon dioxid. Typical results may be seen in Table 1.

TABLE 1.—Dog Anesthetized with Chloralose

	Air Exhaled in Five Minutes	CO ₂ Per Minute
Normal	30.5 L.	129
Carotids closed	49.8	173
Normal	40.7	122
Carotids closed	52.3	177

TABLE 2.—Dog Anesthetized with Chloralose

	CO ₂ Vols. Per Cent
10.19' 30" Blood from right femoral artery.....	43.6
10.31' Both common carotids closed.....	
10.46' Blood from right femoral artery.....	38.6
10.50' 05" Carotids reopened.....	
10.50' 10" Blood from right femoral artery.....	42.4

Necessarily, also, the changes in ventilation produce modifications in the carbon dioxid tension of the arterial blood. This is illustrated by results in Table 2.

After these matters were settled, we investigated, at first with Heymans and Bouckaert in Ghent, and later in my laboratory in Liège, the actions of different drugs which are known to stimulate the respiratory center, but especially sodium sulphid, potassium cyanid, nicotin, lobelin, hordenin, hexetone, and carbaminocholin.

Extremely small doses (1/1000 to 1/10,000 milligram) of these substances injected into the common carotid artery may produce an enormous hyperventilation, while the same doses injected into the internal carotid artery beyond the sinuses, *i. e.*, directly toward the brain, do not have the slightest action. In fact, large doses of these substances injected in this way have a tendency to produce a depressant action.

On the other hand, if the opposite carotid artery is denervated in the same animal, and the injection of drugs into this denervated carotid is repeated, there is no increase in respiration. Exactly the same results are obtained in unanesthetized dogs, with and without denervated sinuses.

These chemical substances also have an action on the heart rate and on the vasomotor center, effects which are likewise essentially reflex in origin. Injection into the common carotid artery of any of these substances, namely, cyanid, sulphid, lobelin, nicotin, hordenin, and carbaminocholin, produces a bradycardia up to cardiac arrest, while the arterial blood pressure rises. The same substances injected into the denervated carotid artery or vertebral artery, or into the internal carotid beyond the sinus, no longer slow the heart or raise the arterial pressure.

Therefore, it can be said that there exists, at the carotid sinus, a sensitiveness devoted to the perception of changes in blood pressure and to chemical changes in the fluid which bathes this organ.

The vasomotor system is sensitive, through the carotid sinus, not only to drugs but also to one of the most important physiological substances, namely, carbon dioxid. It is known from the work of Severini that carbon dioxid acts locally as a powerful vasodilator. But if it is administered through the lungs, after the vagi are severed, it acts as a stimulant of the vasomotor center. This stimulating action of carbon dioxid can be seen

even when both carotid arteries are occluded, that is, when the arterial pressure is elevated. This can be demonstrated by giving carbon dioxide at the plateau of hypertension, when the blood pressure rises still higher. However, in dogs with the nerves of Hering cut, that is, in chronic hypertension, the inhalation of carbon dioxide is always followed by a sudden and considerable fall of blood pressure.

Consequently, it seemed to me that the current explanation of the action of carbon dioxide on the vasomotor center might not be correct, and that the rise of pressure obtained by inhalation of carbon dioxide might be due to a chemical action through the carotid sinus. In other words, carbon dioxide might act on the vasomotor center reflexly, and not directly, as is currently believed.

In order to test this theory, it was necessary to arrange an experiment in which carbon dioxide was prevented from coming in contact with the carotid sinus during the time it was acting everywhere in the body and especially on the vasomotor center itself. Using the technique of Moisejeff, I closed all the arteries from the carotid sinus (internal carotid, external carotid, occipital and pharyngeal arteries), and left unchanged the nerves of Hering. Under these conditions, the sinuses were isolated and blood could not reach them through the circle of Willis, although they remained sensitive to changes of pressure. Then, at the crest of hypertension, the animal was made to inhale carbon dioxide, and there was obtained a fall of pressure absolutely identical with the fall after the nerves of Hering were cut, instead of a rise of pressure as under normal conditions.

Therefore, it may be concluded that carbon dioxide does not act on the vasomotor center directly, but acts chemically as a reflex stimulant through the carotid sinus.

Very interesting are some results which I have obtained with drugs in chronic experimental hypertension. These results were obtained on three dogs, with the nerves of Hering and Cyon cut and blood pressures for six months of 190, 200, and 220 millimeters of mercury, respectively. The dogs were healthy, and trained to lie quietly for hours for use in the experiments. Their arterial pressures were estimated once weekly by introducing a large needle into the femoral artery, without anesthesia. The drugs tested were chloral hydrate, papaverin, nitroglycerin, and sodium nitrite. The results were entirely negative. Neither papaverin (100 milligrams daily), chloral hydrate (1 to 3 grams daily), nitroglycerin (10 drops daily), nor sodium nitrite (200 to 500 milligrams daily) produced the slightest fall of pressure in these three dogs. Moreover, one of the most common drugs used in treating hypertension, namely, amyl nitrite, always showed the opposite effect in more than three hundred unanesthetized dogs. That is, amyl nitrite always caused a rise of blood pressure under the conditions (Fig. 2). This rise of pressure was also due to a reflex action, as the result of stimulation of the fifth nerve in the nose.

Thus, if the results on unanesthetized dogs are applicable to man, it may be concluded that amyl nitrite causes hypertension, and that none of several chemical substances tried appears to have any demonstrable effect on chronic hypertension under these conditions.

CONCLUSIONS

From these different results, and from others which I have not discussed here, it would appear that the region of the carotid sinus, the anatomical existence of which was ignored only a few years ago, is of great importance, not only for the physiological regulation of respiration, but also for that of the circulation. Rhythm and amplitude of respiration, pulmonary ventilation, elimination of carbon dioxide, and the responses to many chemical substances are subordinate to it, as also are the regulation of the blood pressure, and, to a great extent, the depth and rate of systole. On it depends also the distribution of blood to the muscles and the viscera, through effects on peripheral vasomotor states.

These facts, briefly stated, show that in the carotid sinus there is an organ essential for normal and pathological regulation of two of the most important functions in the body, namely, respiration and circulation. They illustrate, also, the importance of physiological and pharmacological studies, which, if properly applied, may be of value in clinical work.

Institute of Experimental Therapeutics,
University of Liège, Belgium.

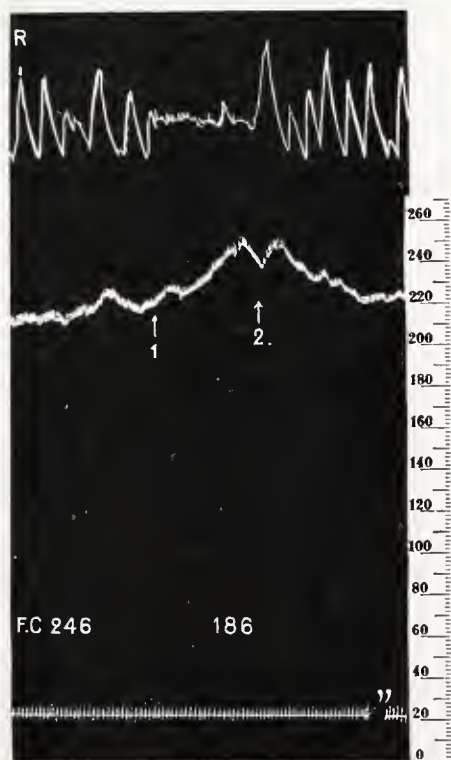


Fig. 2.—Dog, hypertensive for nine months. From 1 to 2, inhalation of twenty drops of amyl nitrite through the nose. At top, respiratory record; below, blood pressure record. F.C., heart rate.

STONE IN THE KIDNEY*

By BURNETT W. WRIGHT, M. D.
Los Angeles

DISCUSSION by F. S. Dillingham, M. D., Los Angeles;
Dozier H. Gibbs, M. D., Los Angeles; Miley B. Wesson,
M. D., San Francisco.

CALCULUS formation in the human kidney has been described by medical writers since the time of Hippocrates. Due to their inaccessibility, the technical difficulties involved and the uncertainty of the diagnosis, ancient surgeons rarely attempted the surgical removal of renal calculi, although they operated frequently for stone in the bladder. The symptoms of the disease, however, were well described by many early writers. Treatment consisted in efforts to control the pain of renal colic and measures intended to hasten the passage of stones. Some of these were fantastic and, needless to say, ineffectual. The earliest attempts at operative interference for stone consisted in the incision of palpable, lumbar swellings and the evacuation of pus in which calculi were occasionally found. Morris did the first nephrectomy for stone in 1880, and in the following year, 1881, Beck removed a kidney stone through an incision in the pelvis, the first pyelolithotomy. In 1896, which is within the memory of many of us here today, MacIntyre made the first positive x-ray diagnosis of a kidney stone. Prior to that epochal advance, exploratory exposures, that were of necessity often bilateral and fraught with disappointments, were the rule. Today the combined use of the cystoscope, the x-ray and, more recently, intravenous pyelography have so clarified the diagnosis of kidney pathology, including stone in the kidney, that an exploratory exposure of that organ is rarely, if ever, justified. The exact information to be derived from modern diagnostic methods has opened a new and fascinating field of conservative renal surgery. Many kidneys that formerly would have been removed can now be saved.

URINARY LITHIASIS

A discussion of stone in the kidney should include, in a large degree, the whole subject of urinary lithiasis; for nearly all stones found in the ureter and a large percentage of those seen in the bladder and urethra originated in the kidney and left that organ while still small enough to pass through the pelvic outlet. We believe it is quite possible that all stones found in the urinary tract, except certain prostatic concretions which are not true urinary calculi, and those stones with a foreign body as a nucleus, have actually originated in the kidney. In this connection a distinction should be made between the formation of a stone and its subsequent growth. For example, many bladder stones, on cross section, will show a nucleus of calcium oxalate or, more rarely, uric acid, surrounded by concentric layers of calcium or

ammoniomagnesium salts, suggesting the renal origin of the nucleus and the vesical growth of the stone. Because of the frequent association of bladder stones with chronic urinary retention, such as occurs with hypertrophy of the prostate and contracted vesical neck, it has been believed that they begin and develop in the bladder, as a result of the stagnation of the retained urine. It is much more probable that the process of crystalline fusion actually begins in the tubules of the kidney, as a consequence of the secretory and chemical changes incident to chronic urinary obstruction, which produce a disturbance in the colloidal balance sufficient to precipitate and unite crystals. The frequent occurrence of renal stones in patients with prostatic obstruction adds weight to this theory. It is reasonable to assume that for every stone retained in these kidneys many microscopical crystalline fusions have passed down the ureter and reached the bladder as potential nuclei for vesical calculi.

There is ample clinical and experimental evidence to support the statement that urinary obstruction, with retention, is not of itself a cause of stone formation. If such were the case, we could expect calculous formation in the majority, if not all of the cases of hydronephrosis, when in reality it is infrequent. The larger the hydronephrosis, the less likely it will be for a stone to form, probably because of the diminished concentration of the urine that results from impaired function. Obstruction does hasten the growth of stone, however, especially in the presence of infection and alkaluria.

FORMATION OF STONES

The majority of stones are formed in the kidney, and are composed of crystalloids of various urinary salts, held together by a colloidal matrix. In many stones these two substances are found in alternate layers, causing the laminations seen on section. The colloids are the binding material that holds the crystalloids together. When the colloidal matrix is dissolved experimentally outside the body, the crystalloid portion does not adhere, but crumbles into a fine powder. If stones formed purely as the result of a high concentration of salts that are normally in solution in the urine, as was formerly believed, it would probably be possible to prevent them by managing the diet and increasing the fluid intake. There is some additional quality in the urine of the most of us which enables it to retain many times more of the stone-forming salts in solution than could be dissolved in an equal quantity of water. Even this does not answer the question entirely, for many individuals constantly show crystals, in numbers sufficient to make the urine turbid, and never form stones. An exception should be made in cystinuria, which is a congenital, familial diathesis, due to a derangement of the intermediate metabolism of the body. In this rather rare condition, large numbers of cystine crystals are present in the urine and about 3 per cent will form cystine stones.

The solubility of the stone-forming substance apparently depends on the colloids. The diluent

* From the department of urology, Santa Fe Coast Lines Hospital, Los Angeles.

* Read before the thirtieth annual session of the Nevada State Medical Association, Las Vegas, September 29-30, 1933.

in urine is water. It has been estimated that it would require five gallons of water to dissolve the amount of uric acid eliminated in solution in a normal individual's urine each day. Just how the colloids can hold this excess of poorly soluble salts in suspension, and what factors stimulate or retard the colloidal mechanism, is a problem yet to be solved. A diminution in the protective colloidal mechanism below a certain point will cause an individual to form a stone in the absence of infection, urinary stasis, or a nucleus. At the present time there is some evidence that indicates that the colloidal mechanism, or what we have termed the "normal protection against stone," not only varies in different individuals, but may possibly increase or diminish in the same subject, depending on the hydrogen ion concentration, or pH of the urine.

INFECTION

The rôle of infection in the formation of stones is still a mooted question. The work of Rosenow and Meisser, Hager and Magath, and others, has done much to prove the bacterial origin of certain stones, but it fails to explain the formation of calculi in a sterile urinary tract, of which there are many examples. Bacteria have been found in the centers of calculi as far back as 1886 (Galippe), and soft masses composed of bacteria and sufficiently dense to cast a shadow on an x-ray film, have been found in the kidney pelvis; but many renal calculi have been studied and cultured by careful observers with negative results.

DIETARY DEFICIENCY

The work of Osborne and Mendel, Fujimaki, Van Leersum, and others, would indicate that certain stones are the result of a deficiency of the fat soluble vitamin A. They have been able, in their feeding experiments, to form calculi in rats and mice by withholding that element from the diet. The exact manner in which these stones form is not understood, but it appears certain that infection plays no part in the process. We have no data that suggest that avitaminosis has been a factor in the cases we have observed.

GEOGRAPHICAL DISTRIBUTION

It is well known that the inhabitants of certain countries and localities are more susceptible to stone than people who live in other parts of the world. Comparatively small areas are known to be rich in stones, while the adjacent territory contains few. In India, for example, urinary calculi are most prevalent in the northern provinces and are rarely seen in southern India. In southern China, stone is exceedingly common, but is very rare in the northern part of that country. It is practically unknown in South America, and is rarely seen in Africa, except in Egypt, and only in the southern part of that country, where it is prevalent. In Great Britain, urinary calculi are rarely seen in the southwestern countries, but they are common along the whole of the east coast. A small part of Derbyshire produces many stones. Civiale stated that stone was more common in Holland than in any other part of Europe. They

are rarely seen in Ireland. They are common in the east and southeast of France, yet are practically unknown in Normandy. In the United States the Ohio valley has long been known to be rich in stone. Southern California and southern Florida show a high prevalence.

It is obvious from the above that stone is commonly found in countries and localities that differ widely in climate, soil, and geological formations. At first sight it would appear that climate has no influence on the frequency of lithiasis. Stone is reported to be common in Iceland and Holland, in both of which the climate is cold and moist. Dry heat and marked evening fall in temperature are found in the valleys of the Euphrates and Ganges, where stone is common, but these conditions are also present in the Sudan, where stone is very rare. We believe, with Swift Joly, that dry heat may be a deciding factor in those who are predisposed to stone, as some of the more insoluble salts may be precipitated when the urine is concentrated through loss of water from sweating and surface evaporation; but that it has no effect on those in whom the urinary colloids are able to retain them in solution.

WATER

Our patients who live on the desert attribute their stones to drinking "hard" water. In our investigation we have studied water analyses from various sections and can find nothing to substantiate this view. We believe that the quantity of fluid consumed is more important than the quality, and that only in those individuals in whom the tendency to form stones is active, is the concentration of the urine of importance as a contributory factor. The excessive loss of fluid through surface evaporation that occurs in the inhabitants of arid districts is probably of more importance.

RACE

That some races have a much higher natural protection against stone than others seems well established. In the United States the rarity of calculi among negroes has often been noted. For years, not a negro entered Johns Hopkins Hospital with stone, in spite of the fact that a large percentage of their clinical material was drawn from that race. The Jackson Memorial Hospital of Miami, which is the only institution we know of with a higher stone ratio than our own, and with a large negro population to draw on, admitted but one negro with stone in five years, and he was a distinct mulatto. Holmes and Coplan were able to learn of only three cases among Florida negroes. We have never seen a negro with a calculus.

Whether or not stone is common in Mexico, we are not prepared to state, for as yet we have no data that is reliable. We do know, however, that it is noticeably rare among the Mexican employees of the Santa Fe Railroad. A recent report shows 24 per cent of the Coast Line employees to be of that race, which is slightly lower than normal. Two of the 197 cases (1 per cent) of stone we have seen in that company's hospital

were Mexicans, and one of these was born in San Francisco and had never been out of the United States.

OCCUPATION

There is a belief among railway employees that riding on an engine predisposes to kidney trouble. Engineers head the list with twenty-two cases. They all believed that the vibration of the locomotive was responsible for the stones from which they suffered. It is well known that highly saturated solutions will often throw down salts when subjected to oscillation, but we doubt the application here. A strikingly large percentage of railroad engineers are stout and lead sedentary lives, and the majority have been long in the service and are past middle life, when urinary stasis and infection are more prevalent. Firemen, who are subjected to the same vibrations, contributed but one case in our series.

TREATMENT

We have borne in mind the fact that these patients were nearly all dependent on their positions for a livelihood, and that wherever possible they were to be returned to duty with the least delay and as nearly intact as consistent with good practice. The removal of a kidney in a railroad employee may seriously impair his efficiency, and subject him to an increased risk in a hazardous occupation, where trauma to the remaining kidney may cost him his life. Conservative surgery has, therefore, been practiced wherever possible. Nephrectomy was done in but eight instances, in sixty-five cases of renal lithiasis, and these were all for calculous pyonephrosis, where great destruction had occurred. Twenty-five cases of silent stones have not been molested. The majority of these were small and uninfected. They are kept under close observation, wherever possible. In thirty-two patients, renal stones have been removed by operations that did not include removal of the kidney.

RECURRENCES

The incident of recurrences has been low. Five patients (2.5 per cent) in this series have returned with new stones. Three of these were renal, one a vesical calculus, and one ureteral. Two of the renal cases had previously had a pyelolithotomy, the third had had a ureterotomy for stone. The bladder stone formed in a patient who had a litholapaxy, where a fragment was probably left in the bladder. The patient with a stone in the ureter had previously passed a stone from the same side, following dilatation.

727 West Seventh Street.

DISCUSSION

F. S. DILLINGHAM, M. D. (1016 South Broadway, Los Angeles).—I believe that more routine x-ray examinations of the genito-urinary tract should be made. There are cases of silent calculi, as mentioned by Doctor Wright, in the kidney, ureter, bladder, and prostate. Many older patients were given morphia for acute renal colic, and because the pain stopped, the stone was thought to have passed and no follow-up examination made. One patient was relieved by a hypodermic of morphin twelve, and again eleven years before examination; and a stone, dice-shaped, and over

one centimeter in size, was caught at the pelvic brim, where it formed a diverticulum and caused no symptoms for the next ten years.

After litholapaxy, even when followed by the use of the cystoscope, it has been my habit to use the evacuator two weeks later, as some of the dust or finer particles of sand may become enmeshed on the surface of the bladder wall, and each may serve as the nucleus for a new stone. After an interval of about two weeks, they evacuate easily.

In this age of "alkalies" and "acidosis" my fight has been to make and keep the urine acid. Ammonium chlorid and sodium acid phosphate have given me the best results, but each patient's response must be watched and the measures varied.

Some years ago I noticed that, after a renal pelvic lavage or cystoscopic manipulation for the removal of calculi, the patients were apt to have less discomfort, or colic, if they were ambulatory, than if they went to bed and kept too quiet. Later, in treating cases of multiple, bilateral renal calculi in children recovering from poliomyelitis, it was found that they improved more rapidly if, in addition to mechanical dilatation of the ureters, urinary antiseptics, vitamin A, more fluids, etc., they were encouraged to take more physical exercise. Some who could not stand the pool work at first, would be able to stay in for increasing periods after their ureteral strictures had been dilated above No. 11 F, and were encouraged by the showers of sand and calculi that followed each cystoscopic manipulation. They would observe that more stones would be passed after their pool work, or after a sudden jolt while riding in an automobile.

The truth is forced on those who later have had to handle solitary kidneys with calculi, or a ureter blocked by a stone, that a more minute preoperative study might have saved the other kidney. Nephrostomy may bring back a seemingly hopeless kidney so that more radical work can be done later.

✽

DOZIER H. GIBBS, M. D. (1061 Roosevelt Building, Los Angeles).—It would seem, at the present time, that the problem is confined to the control of the colloid-crystalloid mechanism, which may be influenced by diet, focal infection (specific streptococcic infection as demonstrated by Rosenow), or more probable by some faulty process during the metabolism of certain foods.

In individuals with this abnormal colloid-crystalloid balance, the formation of calculi are hastened by urinary obstruction, infection, highly concentrated urines, etc.; whereas persons with a normal balance do not form stones under the same conditions.

At the Children's Hospital there were only four cases of urinary calculi observed during the past ten years. One of these was a ureteral stone in an Indian boy four months old. I have seen one young negro man with a ureteral stone.

✽

MILEY B. WESSON, M. D. (490 Post Street, San Francisco).—All surgeons know how to treat stones in the kidney. They remove the stones by cystoscopic manipulations, or open operations, and sometimes even do nephrectomies, intentionally or otherwise. What the urologist, as well as the general practitioner, wants to know is how to prevent the formation of stones, or the recurrence of such in kidneys from which stones have been removed.

This subject, the essayist will consider under five headings. First: Prevent urinary stasis by providing adequate drainage. The kidney will clear of an infection without cystoscopic lavages provided there is free drainage. There is a difference of opinion as to whether the stones originate in blocked tubules and fall into the pelvis, or whether they are formed in the pocket above a ureteral stricture and migrate up into

the pelvis. If adequate drainage is present, we will probably not have to consider either of these theories, for there will be no stones. Second: Remedy metabolic errors. There will be no exanthin, cystin or urate stones formed without there is a deficiency of vitamin A, and this will not occur if cod-liver oil and such preparations are freely used. Third: Remove specific infections. If there are no urea-splitting organisms present, no phosphate or carbonate stones will be formed. The carbonates are the commonest stones found in the United States, whereas the phosphates predominate in England. Fourth: Eliminate focal infections. Rosenow and Meissler found that by taking a streptococcus from a stone carrier, and injecting the culture about devitalized teeth, renal calculi would uniformly appear. Five: Keep urine acid and sterile by use of mouth antiseptics.

The ordinary preparations routinely recommended for mouth medication are valueless. In several recent researches the investigators uniformly agreed that the Azo dye preparations colored the urine. Hexamethylamin has been our stand-by for years. We knew that it was valueless unless the urine was acid and we depended upon acid sodium phosphate to bring this about. Scientists have now demonstrated conclusively that unless the urine was very highly alkaline to start with, the acid sodium phosphate never caused it to become acid. I might say in passing that acid sodium phosphate, even if it does acidify the urine, can be uniformly depended upon to upset the stomach and cause diarrhea. Litmus paper is valueless in determining acidity of urine. Methyl red must be used. It is yellow at pH 6 and bright red at pH 4.6. Colon bacilli will not live when the hydrogen ion concentration pH remains below 5.5. Ammonium chlorid is very satisfactory for acidifying the urine, but it causes gastric distress and, furthermore, is practically valueless in the 10 or 20 grain doses commonly prescribed. Dilute aqua regia (drams 1 to 8) will bring about a condition of acidity, but most patients do not tolerate well this drug. Ammonium nitrate in enteric-coated capsules will not upset the stomach, and will reduce the hydrogen ion concentration (pH) to below 5.5 in doses of 15 to 30 grains four times per day. Unfortunately these have not been put on the market by any manufacturing chemist. If the patient is hospitalized, the ketogenic diet is very valuable for reducing the hydrogen ion concentration (pH). Doctor Helmholtz of the Mayo Clinic has recently shown that to be bactericidal, a concentration of 0.5 per cent betaoxybutyric acid with a pH of 5.2 to 5.3 is necessary. Furthermore, that these patients go into a more satisfactory ketosis if the basal metabolism rate is raised very carefully and conservatively by the administration of thyroid. My experience has been that in only rare cases am I able to produce a sufficient degree of acidity by the ketogenic diet alone, and I supplement it usually with ammonium nitrate pills.

Attempts to dissolve stones have not proved satisfactory in my hands. Phosphate stones are supposed to dissolve with 1 or 2 per cent phosphoric acid when irrigated through a ureteral catheter, or preferably a ureteral catheter and nephrotomy tube. If carbonate stones are irrigated with phosphoric acid, they apparently increase in size and number. Hydrochloric acid, one-half per cent, is supposed to be specific for them, but in my cases such treatment only causes the patient to have chills.

Too often in the field of industrial medicine we meet with nonscientific claims as to the etiology of disease, the compensation angle having a tendency to blur our scientific vision. Locomotive engineers no more get stones from the jolting of an engine cab than does a laborer acquire a "traumatic" epididymitis from lifting a heavy object. They are both secondary to infections, one in the kidney and the other the seminal vesicles. The stones that occur in the kidneys and bladders of patients with broken backs are not due to the injury, but to the infection that uniformly follows catheterization.

DERMO-SUBCUTANEOUS FLAPS—THEIR MANAGEMENT IN RECONSTRUCTION SURGERY*

By GERALD BROWN O'CONNOR, M. D.

AND

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DISCUSSION by Will L. Miles, M. D., Los Angeles; W. S. Kiskadden, M. D., Los Angeles.

IN reconstruction surgery, dermo-subcutaneous flaps are powerful weapons in combating major defects. These flaps, in view of their versatility of application for functional and cosmetic reconstruction, are indispensable for the reconstruction of defects following disease, trauma or operative interference; so that continued study of their construction and application is essential.

There are several general surgical principles that from experience must be considered when constructing flaps, no matter what type. The tissues selected for surgical correction should be identical—or as nearly so as possible to that surrounding the defect—in color, texture, thickness, and contained epithelial elements. It is best to make the base of any flap twice as wide as the tip to insure complete circulation to the distal end; also, in the average case, the tip should be blunt or rounded instead of pointed, thus eliminating the poorly nourished end-piece that may necrose and ruin an otherwise good result. This caution is necessary when dealing with flaps that have a narrow base; or one designed for improvement of function in which the existing scar tissue has to be utilized. The blood supply is important, and when flaps are constructed they should be planned parallel to the arterial supply rather than across it. So, too, Langer's skin lines must be given due consideration; for incisions made to conform with these markings give abundant material with a good blood supply and a minimum of donor scar. This is very forcibly demonstrated in surgery of the hand, for when incisions are made across the grain of the skin or flexion creases disastrous functional results follow. Atraumatic technique of exceptional accuracy should be employed when constructing flaps as well as in all other phases of reconstruction surgery.

TYPES

The four major types of dermo-subcutaneous flaps that we shall consider in this presentation are:

1. Transposed flaps.
2. Rotating flaps.
3. Pedicle flaps.
4. Tubed pedicle flaps.

1. Transposed flaps are the simplest of the group. However, considerable surgical ingenuity is required so to place incisions as to utilize tissue redundancy to its full functional and cosmetic capacity. The object of these flap procedures is tissue conservation of material present, which is

* Presented before the Industrial Section at the sixty-second annual session of the California Medical Association, Del Monte, April 24-27, 1933.



Fig. 1a

Fig. 1b

Fig. 2a

Fig. 2b

Fig. 1a, Case 1.—Loss of nose tip, most of ala and end of septum, from automobile accident.

Fig. 1b, Case 1.—Rotating flap. Lining formed by inturned flap from nasal bridge, covering made from rotating flap from forehead. Small line of healing and edema of flap still visible, due to recent operation.

Fig. 2a, Case 2.—Large burn scar of neck, chest and shoulder. Heavy keloid scar holding head and neck in marked flexion contracture.

Fig. 2b, Case 2.—Rotating flap. Large flap rotated from chest to relieve contracture and cover defect created by excising all scar tissue. Some return of keloid along flap edge due to not obtaining prophylactic radium treatments, having to return to country.

so rearranged and distributed as to correct existing defects without additional deformity. Very little difficulty is experienced with these flaps due to their relatively small size, excellent blood supply, and the fact that most of them are constructed from normal tissue.

2. Rotating flaps are very closely akin to those just mentioned. They differ, as their name implies, in that they are rotated through a much greater arc, and are utilized for tissue replacement rather than for transposition.

3. Pedicle flaps are characterized by one or many pedicles, usually not more than four, for blood supply. They are employed for immediate tissue replacement to not too distant parts.

4. Tubed pedicles are radical modifications of the above flaps in that the tissue is tubed and attached at both ends. This is potentially a closed epithelial system, as the donor area is sutured as well as the under surface of the tube and its two attachments. Tubed pedicles are very useful in carrying relatively large flaps of skin. At the time the pedicle is being transferred a racquet-shaped extension of dermo-subcutaneous tissue is elevated with it. This gives more tissue, length to the flaps, and assures a better blood supply when the other end of the pedicle is transferred. This racquet-shaped extension of tissue can be utilized at successive transfers of the original pedicle without any great danger of necrosis. The largest tubed pedicle we have constructed was 17 inches long with a tube circumference of $3\frac{1}{2}$ inches. One racquet-shaped extension was elevated on each successive transplant of the original pedicles, measuring 5 inches in length and $4\frac{1}{2}$ inches wide. This is an example of the massive amount of material that can be moved using the tubed pedicle flap. The further advantages of this type of flap are many, as has been emphasized by the authors in the August 1931 issue of CALIFORNIA AND WESTERN MEDICINE. A brief summary of their advantages, follows:

1. The closed epithelial system eliminates infection;

2. Reduces scar tissue formation and, incidentally, tissue loss;

3. Enhances pedicle blood supply;

4. Permits many transfers at minimum tissue loss; and

5. Distant replacement is practically unobtainable with any other type of dermo-subcutaneous graft.

INDICATIONS

These grafts are employed primarily for the subcutaneous tissue they contain, which is taken in varying amounts, depending on the depth and location of the defect encountered. At times, however, one must resort to flaps not productive of the best results, due to the most suitable material having been destroyed by the original injury. This is demonstrable in burns of the neck and ears, wherein loss of the suitable neck tissue forces one to select other less desirable tissue for ear reconstruction. These grafts are used to correct defects anywhere in the body where there has been a subcutaneous loss; also, to cover nerves, great vessels, tendons, bones, joints, and to make digits, facial and other appendages. They may be used in the presence of mild infections, in carefully selected cases. If this is done, adequate drainage must be established, elimination of all tension, and the wound treated generally as an infected wound.

METHODS OF MOBILIZING FLAPS

For expeditious tissue replacement to distant areas, limb transportation is the best. The limb acts as a conveyor, decreasing the number of surgical procedures and thus shortens the total convalescence. Waltzing or caterpillaring of tissues, when the defect is in the vicinity of the donor area, are the other methods advocated. When necessary, flaps may be sutured together for blood supply and later transferred. This type of pedicle flap transfer is the exception.

METHODS OF OBTAINING FLAPS

When planning flaps the donor area is closely scrutinized. It must have (1) sufficient tissue;



Fig. 3a



Fig. 3b



Fig. 4a



Fig. 4b

Fig. 3a, Case 3.—Crush of heel with loss of soft tissue and persistent ulcers six months after injury.

Fig. 3b, Case 3.—Pedicle flap. Heel scar excised and defect covered by a dermo-subcutaneous designed flap, including fascia lata taken from left thigh.

Fig. 4a, Case 4.—Large radium burn with resultant scar from attempted removal of birthmark. Loss of eyebrow, distortion of eyelid, and growth of frontal bone diminished.

Fig. 4b, Case 4.—Pedicle flap. Pedicle flap from chest, using wrist as a conveyor transplanted to forehead. Wolfe graft from hair bearing area behind left ear used to reconstruct eyebrow.

(2) the color and texture must blend with the tissues of the recipient area; (3) its epithelial elements should be in accord with those of the recipient area; (4) and any plan should conform with the general surgical principles, as have been mentioned. The back, and especially the abdomen, are the best sites for flap availability, due to their large area and tissue redundancy. By a series of pedicles or other maneuvers a large area of dermo-subcutaneous tissue can be utilized for distant parts. When flaps are considered for the face, more emphasis must be placed on appearance than in other locations; so for this reason, in doing facial repair, when possible we employ flaps in the immediate vicinity. Considerable tissue can be spared from the neck, upper chest and forehead and lends itself admirably to facial reconstruction. At the other extreme of the body, the heel requires

its new covering for a functional rather than a cosmetic repair. With this in view, the upper outer thigh, and especially the gluteal region, are the donor areas of choice. When the outer thigh is used, a portion of the fascia lata should be incorporated in the flap to give it a more rugged weight-bearing consistency. The operative technique when obtaining flaps is practically always the same, varying only in the type of flap selected. The damaged area is completely freed of scar tissue and as far as possible returned to a functioning condition. The flap is measured, designed, and constructed by sharp dissection. It is then accurately sutured into its new bed without tension, torsion or other mechanical interference with blood supply or return. The defect of the donor area is approximated by wide undermining or other procedures necessary to obtain primary union. Distant flaps are designed in the same manner.

OPERATIVE APPLICATION TO RECIPIENT AREA

This, we believe, is one of the most important phases in tissue transplantation work; for a carefully designed flap, with good blood supply, may fail miserably from preventable postoperative sequelae. First, a complete hemostasis is essential both in the recipient area and donor flap. When this is accomplished, latent hematoma, so destructive to reparative surgery, are avoided. Accurate hemostasis along the edges of the donor flap increases the central circulation, and is often the deciding factor in retaining tips of flaps. Drainage is instituted at the surgeon's discretion, but should be dispensed with when possible so as not to complicate the procedure. Accurate suture application of the donor and recipient bases, to eliminate dead spaces and minimize the resultant scar between the graft and its bed, is imperative. The type of cutaneous suture used may seem a small detail, but it is most important to obtain a good junction and primary union. The circulation at the periphery of the flap is feeblest, so that improper



Fig. 5a, Case 5.—The tubed pedicle from the abdomen has been transplanted to the elbow, replacing scar tissue in that region.



Fig. 5b



Fig. 5c



Fig. 5d

Fig. 5b, Case 5.—The tubed pedicle has been spread out, replacing the scar on the extensor surface of the arm.

Fig. 5c, Case 5.—Flexion of elbow after completion of transplantation.

Fig. 5d, Case 5.—Extension of elbow.

suturing will favor tissue necrosis. We have found by experience that the subcuticular suture, usually the finest silkworm gut, has given us the best approximation with the least amount of reaction. This has the further advantage of relieving tension and may be left *in situ* for relatively long periods of time without stitch marks, and assures a firm narrow scar which does not tend to spread. This suture may be reinforced with interrupted or continuous sutures, which are laid gently across the suture line and removed on the first to the fourth day postoperative, to avoid stitch marks. Pressure dressings are sometimes advisable to more closely approximate the flap to its bed or to reduce the engorgement of the flap. The pressure should not be over 15 to 20 millimeters of mercury, and should be constantly and carefully observed by the nurse in charge, who is trained to quickly recognize adverse developments and to correct them. We use ordinary rubber sponges under a blood pressure apparatus, adhesive or bandage dressing. It is wise to personally apply the pressure and keep it under direct observation for at least half an hour after application, so as to regulate the pressure to permit circulation to the end of the flaps to one's own satisfaction.

Utilization of the scar or other epithelial structure in the recipient bed for pedicle transfers is of considerable help in preventing infection and converting an open epithelial system into a closed one. The epithelium is so reflected as to cover the undersurface of the pedicle. We do not use plaster as our immobilizing substance, due to its bulk, weight, and the discomfort it causes the patient. We rely on adhesive tape and other simple procedures, and have found them entirely satisfactory. The more simple and effective the dressing the more comfortable the patient will be. Perfect aseptic technique in the postoperative dressings is essential. The nursing staff should be thoroughly schooled in the handling of this work, as the complicated dressings offer a big loophole for infection to creep in unless minute attention is paid to details. Destructive infections will often nullify an otherwise perfect result and place added burdens upon both the patient and surgeon, so that the

strictest of prophylactic measures should be employed to prevent them. Planning and sustaining a competent blood supply is of equal importance as preventing infections. When the circulation is good, these flaps may be dressed dry or exposed. When the flap is white—showing deficient arterial supply—sterile normal saline compresses, every fifteen minutes to half an hour, the temperature at 105 degrees, with efferent massage is indicated. Too much instead of too little blood supply is usually the offending factor, resulting in engorgement with cyanosis due to stasis and impaired venous return. Gentle afferent massage with drainage of the sides and tip of the cyanotic flap will generally preserve it. Pressure dressings of 15 to 20 millimeters of mercury have proved of value in cyanotic flaps. These flaps assume a normal color when mild constant pressure is applied, due to decreased capillary and venous engorgement. This procedure we feel has been responsible in certain of our cases for the viability of the entire flap. Hypertonic saline compresses along the suture lines will encourage drainage and often assist in reducing flap engorgement. If the vitality of the flap is immediately questionable it should be resutured to its original bed, thus returning the flap to its normal tension, eliminating tortions and unfavorable hydrostatic changes. This resuture encourages increased blood supply through the base of the flap, so that it can be elevated with safety at a later date. When the tissue is sutured in position and its circulation is doubtful, corrective measures must be instituted at once, for the first few hours are the deciding ones. Ease of position and the simplest immobility will add greatly to the end-results and comfort of these unfortunate patients. When flaps are made in which transfers must be done, a period of ten days to three weeks should elapse before the next operative procedure is undertaken. The time varies greatly, depending on individual circumstances, but ordinarily sufficient blood supply will have been established from the new bed to permit excision of the original blood supply in the above period of time.

In conclusion, we wish to emphasize the facts that in the management of flaps due consideration



Fig. 6a



Fig. 6b



Fig. 6c

Fig. 6a, Case 6.—Loss of half the external ear from accident. Tubed pedicle made parallel to clavicle has been transplanted upward.

Fig. 6b, Case 6.—Tubed pedicle has been transplanted to ear.

Fig. 6c, Case 6.—The completed auricle. A small line of healing can be seen on the newly formed lobule.

must be given to the anatomy, physiology, and basic surgical principles involved, and careful attention to the many small but important details if one is to obtain constant good results.

REPORT OF CASES

CASE 1. This patient was injured in an automobile accident. A large piece of windshield glass completely severed the greater portion of the lower third of the nose, creating a marked cosmetic deformity, and interfering with the nasal respiration due to alar collapse and stenosis from resultant scar tissue formation.

The scar tissue was excised, a flap was designed on the bridge of the nose and inverted to form the lining of the new nose. A flap was then designed on the forehead, and rotated down to form the covering of the nose. The base of the pedicle was returned to the forehead in three weeks' time. A Wolfe graft was used to cover the forehead defect.

✓ ✓ ✓

CASE 2.—This patient was burned about the face, neck, and chest one year previous to examination. On examination, there was a large area of heavy keloid scar about the right side of the face, neck and shoulder, holding the head and neck in flexion contracture and markedly distorting the face.

Following excision of the neck scar a large rotating flap from the left chest was raised and sutured into the neck defect, restoring the neck contour, eliminating the flexion contracture and replacing the scar tissue with normal skin. There was some return of keloids about the flap margin, due to the patient's inability to get radium treatments immediately following surgery.

✓ ✓ ✓

CASE 3.—This patient is a miner. He sustained a crushing injury to his right leg and heel on March 29, 1930. Patient was first seen by us on September 1, 1930, at which time the whole heel was covered with scar and there were two persistent infected ulcers present. The infection was treated and then the ulcers covered with Thiersch grafts. Following this, the scar was excised from the heel and a shaped pedicle flap, including a base of fascia lata, was elevated from the left thigh and sutured into the heel defect. The raw area of the thigh was Thiersch grafted. Two and one-half weeks later the thigh pedicle was severed, and the cut end of the flap sutured to the remaining heel defect. One year following his return to work as a miner, the heel graft was in excellent condition in spite of mud, water, and insanitary conditions to which his occupation subjects his body.

CASE 4.—This patient had a large birth mark on the left forehead. This was treated extensively with radium, when the patient was a baby. The birth mark was replaced by scar tissue with a resultant loss of eyebrow and partial loss of eyelid. The growth of the frontal bone was markedly diminished.

At the first operation the handle of a designed flap was raised from the chest and sutured to the left wrist. In three weeks' time, the flap was raised from the chest and sutured into the forehead defect. Two weeks later the connection between the forehead and wrist was severed. Eight weeks passed and then the eyebrow was reconstructed. Patient was confined to the hospital for only a few days after each operation.

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CASE 5.—This patient was severely burned in a tunnel explosion and sustained, among other injuries, a deep burn of the extensor surface of the right arm from the elbow to the junction of the upper and middle thirds. The resultant scar limited flexion to 68 degrees, and even partial flexion caused severe pain in the region of the elbow joint. Fig. 2 (a) shows the scar and the first stage of the scar replacement by a tubed pedicle from the right flank. Fig. 2 (b) shows scar entirely replaced by the pedicle, and Fig. 2 (c) and Fig. 2 (d) show the final result with complete return to normal function. There was entire relief from pain.

✓ ✓ ✓

CASE 6.—This patient was injured when an automobile in which he was riding overturned and he suffered the loss of the left auricle. Repair was done by the use of a small tubed pedicle from the clavicular region, which admirably supplied the necessary type of tissue. The original condition, together with the first step up of the tubed pedicle, is shown in Fig. 3 (a). The next stage where the pedicle is sutured to the antihelix and blended into the remaining helix is shown in Fig. 3 (b). The final result is shown in Fig. 3 (c). Further uses of the small tubed pedicle are shown in an article by one of the authors (G. W. P.) on "Reconstruction of the External Ear," *Surgery, Gynecology and Obstetrics*, March, 1930, pages 601-605.

490 Post Street.

DISCUSSION

WILL L. MILES, M. D. (Pacific Mutual Building, Los Angeles).—This paper presents an exceptionally fine discussion of dermo-subcutaneous flaps. It is apparent that, when at all feasible, the authors prefer the tubed pedicle to all other types of flaps, and with this preference I most heartily agree.

One of the greatest difficulties encountered with tubed pedicles is the frequent tendency toward marked

linear contraction. This is due to insufficient linear tension, and is most frequently seen when the pedicle bases are on flabby tissues or when transporting the tube by the so-called "caterpillar" method. In order to obviate this contraction (which sometimes will reduce a tube to one-half or less of its original length) and maintain normal tension, I have found the use of sponge rubber obturators of great help. This material is available in either blocks or thick slabs, and with scissors can be trimmed to that shape and size which will accurately fill all the space between the tube and underlying tissues and act as an elastic plug. Even after considerable contraction has occurred, the tube can often be restored to its original length by gradually increasing the size of the sponge rubber plug.

The authors' remarks anent the proper schooling of the nursing staff in the after-care of these cases are most pertinent. No other surgical procedure is more dependent upon postoperative care for success than is the dermo-subcutaneous flap.

✽

W. S. KISKADDEN, M. D. (1930 Wilshire Boulevard, Los Angeles).—The results of the essayists prove the soundness of their paper. They have wisely stressed the salient features of the tubed pedicle for the transfer of skin, and have pointed out the means of coping with some of the complications of this procedure. I am in accord with them that this plan is by far the best when skin and subcutaneous tissue are desired. The drawback of multiple operations and prolonged time are more than compensated for by the safety and perfect end-results.

Too much emphasis cannot be placed upon the importance of matching the color of the skin accurately. Many tubed pedicles or flaps fail because, although the defect is filled and the deformity corrected, the patient is left with a patch of new skin entirely unlike the normal skin surrounding the defect. For this reason it seems wiser, as the authors have noted, to utilize skin above the clavicle, whenever possible, to correct facial defects.

In my experience, tubed pedicles in children need a longer period than the usual fourteen days to three weeks before transfer. This is possibly due to the natural small size of the vessels. It may also be partly ascribed to the fact that they are more elastic and thinner-walled than comparable vessels in the adult. In any event, it is much safer to allow sufficient time, from three to five weeks, for their transfer. Moreover, particular attention should be given to see that they have an ample base, that closure of the pedicle is without tension, and that the length of the pedicle is in proportion to the diameter.

SINUS DISEASE IN CHILDREN*

By REA ASHLEY, M. D.
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DISCUSSION by David R. Higbee, M. D., San Diego;
J. Roy Jones, M. D., Sacramento; Francis M. Shook, M. D.,
Oakland.

PRIOR to 1919 little importance was attached to disease in the nasal sinuses of children. It had been known for years that some sinuses were present at birth, and that others developed during early childhood, but it did not occur to anyone that these cavities might harbor infections capable of causing irreparable damage to the general health of the child.

REVIEW OF THE LITERATURE

The first recorded case of sinus disease in a child was reported by G. A. Rees in 1847: an infant two weeks old, with a swelling of the left

cheek, protrusion of the left eye, and a fistula into the mouth. The antrum was irrigated, and the child recovered after six weeks. The same year Douglas reported a similar case in a three weeks' old infant. He thought the infection developed in the nose from a sore nipple of the child's mother.

Several other isolated cases were reported during the period from 1847 to 1898, the diagnosis being made in all cases by the presence of a fistula from the infected sinus, discharging pus. Bryan in 1895 was the first to state that empyema of the antrum might occur in the course of the exanthemata, particularly scarlet fever and measles. Wolf examined the antra of twenty-three children who died of diphtheria, and found the Klebs-Löffler bacillus in all of the twenty-three cases.

Emil Meyer reviewed the literature on this subject in 1901, and stated his belief that the antra were frequently infected, but that they cleared up without ill effect. He also stated that the mucous membrane might possibly, under certain conditions, be altered in such a way as to set up chronic antra disease.

PRESENT-DAY VIEWPOINTS

It remained for Dean and his co-workers in 1919 to point out the direct connection between infection in the sinuses and various general conditions. Since that time so much work has been done, and so much information has been accumulated, that sinusitis now ranks as one of the most common diseases of childhood, and is universally recognized as a diagnostic possibility for a great many pediatric conditions.

This information has been so generally disseminated, and it has such an appeal to the laity, that sinusitis has become the popular disease of the day, just as appendicitis and tonsil disease held the center of the stage a few years ago. Now, doctors not only make the diagnosis, but mothers and fathers, and even the children themselves when interrogated as to the difficulty at hand reply, "Sinus, Doctor." It is therefore very necessary that we, as rhinologists, study each of these patients individually and, with the aid of a competent pediatrician and allergist, try to discover the underlying causes and correct them with as little permanent damage as possible to the individual; always being on our guard, lest we let our enthusiasm run away with us, and attribute more importance to the sinuses than they justly deserve.

ETIOLOGY

Any condition which interferes with free nasal ventilation and drainage acts as a predisposing factor in sinus disease. Among the most frequently encountered are hypertrophied nasal and pharyngeal mucosa, resulting from enlarged, infected tonsils and adenoids; pale, boggy mucosa, associated with allergic conditions; enlarged turbinates; deviated and malformed septa; traumatic abnormalities; and obstructing tumors and atresias.

Among the general predisposing causes may be mentioned endocrine disorders; metabolic disturbances, and lowered resistance, due to deficient and unbalanced diet.

The immediate etiologic factors are acute infection of the respiratory tract; common colds;

* Read before the Eye, Ear, Nose and Throat Section of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

the acute exanthemata, especially pertussis and measles. Poor living conditions, including food, vitamins, clothing, housing, climate, swimming and diving, and, lastly, one of the most important of all and yet one little stressed, contact with other infected persons. Very frequently a mother or father, or some other member of the family, will be found to harbor the same organism in the sinuses as those found in the child.

SYMPTOMS

With the possible exception of the tonsils, the sinuses have the greatest range of symptoms, complications and sequelae of any other location. Some of the more commonly seen are acute and chronic pharyngitis, laryngitis and bronchitis, with hypertrophy of the lymphoid follicles of the posterior pharyngeal wall; cervical adenitis; enlarged peribronchial lymph nodes and peribronchial thickening, bronchiectasis, frequent acute head colds and recurring epistaxis, fits of sneezing, chronic cough (especially at night), attacks of croup, otitis media, headaches, fever without apparent cause, conjunctivitis, orbital cellulitis, orbital abscess, optic neuritis, keratitis, iritis, and blinking of the eyes. Systemic complications may include anemia, malnutrition, asthma, gastro-intestinal upsets, tubular and granular nephritis, pyelitis, myocarditis, chorea, acute rheumatic fever, arthritis, meningitis, cavernous sinus thrombosis, and brain abscess.

Among the physical signs may be mentioned congested mucous membrane of nose and turbinates, and the presence of frank, purulent discharge in the nasal cavity. With the tonsils and adenoids completely removed, the two characteristic signs are the swollen chain of postcervical lymph glands, extending from behind the ear down over the clavicle, and the hypertrophied lymphoid follicles on the wall of the pharynx, behind the posterior pillar of the tonsil fossae.

DIAGNOSIS

Diagnosis is made by a careful history, including family tendencies, evaluation of the signs and symptoms, together with information gained from good radiograms. Our radiologists have become so proficient in their art that the radiograms with which they now furnish us are invaluable as aids to diagnosis. It is surprising how often involvement of the sinuses is detected by means of the x-ray, when not suspected from the history or clinical examination.

I remember a five-year-old child who had a fever ranging from 103 to 105 degrees daily, with four or five convulsions every twenty-four hours, and with marked albuminuria. Repeated nose and throat examinations were negative, even after shrinking the mucous membrane of the nose and the use of suction. Radiograms were taken in the home and an x-ray diagnosis of bilateral antrum disease was made. Both antra were opened intranasally and found to be filled with pus. The temperature immediately dropped to normal, convulsions stopped, albuminuria disappeared, and the child was well in one week. Radiograms should be a routine examination, especially if surgical treatment is contemplated.

Transillumination is less valuable in children than in adults. Antrum puncture is sometimes indicated as a diagnostic measure.

TREATMENT

The fact that so many factors may be combined in the etiology of sinusitis, makes the elimination and evaluation of the several possible causes often a procedure requiring both experience and patience. Treatment is much more difficult in children than in adults. Since the anatomy of this region shows such variations in different individuals, and the symptomatology is so inconstant, the selection of methods of treatment calls for the exercise of the soundest judgment in determining whether a case shall be treated by nonsurgical measures alone or, if surgical measures are also indicated, the type and extent of these operative procedures. Each case has its own individual requirements and problems. Following is an outline of a general plan by which I have obtained best results:

1. Since the sinuses are involved in all common colds, they should be treated in order to prevent the disease from becoming chronic. This treatment consists of nasal packs, the technique of which is given later in this paper.

2. Regulate diet and correct nutritional disturbances as far as possible. Use of natural foods is better than concentrated vitamin preparations. Milk, cream, butter, eggs, vegetables and fruits in unrestricted quantities, whole-wheat cereals in moderate amount. Other carbohydrates should be limited. This care is best supervised by a pediatrician.

3. If an allergic state is present, an attempt is made to identify the allergen and to eliminate its contact, or to increase immunity to it. These studies are best made by a well-trained allergist.

4. *Internal Medication.*—In acute cases small doses of atropin sulphate at three to six-hour intervals and, in older children, capsules containing atropin sulphate, luminal, ephedrin sulphate, are given. Calcium gluconate and parathyroid are often beneficial. Thyroid in small doses, if evidence of hypothyroidism is present. I recall three youngsters, whose entire sinus picture—that is, susceptibility to colds, obstructed breathing, chronic cough and x-ray evidence of thickened membrane in all the sinuses—has been changed merely by administering small doses of thyroid twice daily. Cod-liver oil or haliver oil, given three times a day, are valuable aids. Vaccines, both autogenous and stock, frequently give good results.

5. Other general methods include quartz light treatment over the entire body daily; elimination of swimming and diving; strenuous outdoor exercise, followed by shower or tepid sponge; warm sleeping quarters during acute attacks, and isolation from other infected members of the family.

6. *Local Medical Treatment.*—The local medical treatment follows somewhat the method of Dowling in adults, and consists of the following procedure, regardless of the severity of the attack or the age of the child:

Thin strips of cotton, saturated with a 10 per cent solution of neosilvol, are gently packed into

the nose with a bayonet forceps. The strips are quite moist, so that some of the excess solution will run into the nasopharynx. The size of the strips is estimated to fit snugly, but not tightly, between the septum and middle turbinate, throughout its whole length. Second strips are placed between the inferior turbinate and septum, extending well back and up into the middle meatus. The strips are allowed to remain in place for ten minutes and then removed. The child, if old enough, is instructed to blow the nose gently. Examination of the nasal cavities now shows the mucous membrane greatly depleted, but without the pale, ischemic appearance which follows the use of ephedrin, adrenalin or cocain.

Ten per cent neosilvol is hydropscopic when in contact with the nasal mucosa, and has the following advantages over any of the vasoconstrictors:

Excess water is actually removed from the tissues, thus prolonging the period of free ventilation and drainage, as well as avoiding the secondary vasodilatation.

Neosilvol is in most cases nonirritating, causing no burning or stinging sensation, and can be used over a long period of time without losing its effect.

There is no general reaction to the drug.

Beneficial effects can be noted on the hyperemic and granular appearance of the nasopharynx and pharynx, following its use.

Occasionally we find a child, usually one in which a definite allergic tendency is present, who will develop a severe vasodilatation and hay fever symptoms. Such individuals, however, in my experience, are rare.

Youngsters from four years of age can be easily treated by this method if patience and gentleness are used. After the first two or three treatments, the children cooperate readily. Younger children must be held, since the treatment is not pleasant, because of the tickling sensation. The treatment is kept up once a day for a period of one week, and then the intervals between treatments is lengthened, depending on the clinical appearance of the membrane and the cessation of symptoms.

Improvement in all clinical symptoms have been noted, except in those children with a definite allergic condition and in those infections where surgical interference is necessary.

As a supplementary home treatment, nose drops, consisting of equal parts of 10 per cent neosilvol and two per cent ephedrin, are instilled in the nose three times a day. The indiscriminate use of these drops, however, is to be discouraged, since ephedrin, even in small doses, may cause increased pulse rate, nervousness and loss of sleep, as well as irritation and ulceration of the nasal mucous membrane, if continued over a period of time. Alternating hot and cold packs for fifteen minutes, over the entire face every night, have proved beneficial in some cases. I have noted marked improvement in clinical symptoms in several children, following one or two exposures of the sinuses to x-ray. This came about accidentally, that is, the improvement followed the taking of x-rays for diagnostic purposes, or following retakes because of poor pictures.

Surgical Measures.—Surgical procedures should be conservative. Ventilation and drainage of the sinuses should be established by the least possible amount of trauma and permanent damage to the nasal tissues. Infected or obstructing tonsils and adenoids should be removed. Polypoid anterior tips of middle turbinates should be removed, and local treatment continued for some time. If empyema of the antra continues after systemic, local and conservative surgical treatment has been done, drainage under the inferior turbinate is indicated. The opening should be large, as there is a marked tendency for such openings in children to close. Following such operations the recovery is greatly facilitated by local packs or, better still, a two to six weeks' sojourn in a warm, dry climate.

Surgical treatment of the more severe complications, such as orbital abscess, fistula formation, will depend on each individual case.

In spite of our best efforts, I am sure that we all have some children in whom we have been able to obtain only slight, if any, permanent improvement. Even with these patients, however, we must not give up hope, because experience teaches us that much improvement can be expected as these individuals grow older.

PROGNOSIS

Lyman Richards sums up prognosis as determined by a study of five hundred cases of sinusitis in children, treated at the Children's Hospital in Boston during the past fifteen years, as follows: If the inflammation is pyogenic in origin, is treated promptly, either medically or by conservative surgical measures, the condition in general will subside without leaving after-effects that will be detrimental to general health, beyond a greater tendency to recurrent nasal infection. If, however, the infection progresses untreated to a chronic stage, and if, particularly, the sinus is but a local manifestation of general systemic allergy or other dysfunction, then the sinus disease will persist and continue to occasional local symptoms until the underlying cause is found.

SUMMARY

1. Much knowledge relative to sinus disease in children has been gained in the last ten years.
2. The predisposing etiologic factors are anatomical malformations, allergic tendencies, glandular dysfunction, and poor general living conditions.
3. The immediate etiologic factors are acute respiratory infections, the exanthemata, especially pertussis and measles, contact with other infected persons, swimming and diving.
4. The symptoms are manifold, and include not only local but general manifestations.
5. The diagnosis depends on the evaluation of symptoms, the presence of two cardinal signs, namely, postcervical lymphadenitis and lateral pharyngitis, and the x-ray evidence.
6. The treatment itself consists of general and local measures. The local measures are divided into medical treatment with nasal packs of cotton saturated with hydropscopic, colloidal and silver solutions, and conservative surgical treatment.
7. Prognosis is good, if undertaken early and carried out faithfully.

8. As the child becomes older, marked improvement may be expected.

9. Only by most careful study, laboratory investigations and the closest coöperation between the pediatrician, allergist, and rhinologist can the solving of these intricate problems be accomplished.

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DISCUSSION

DAVID R. HIGBEE, M. D. (3245 Fourth Street, San Diego).—The story of sinus infections in children is a chapter in the history of medicine which belongs mainly to this generation.

Although anatomy is one of the oldest branches of our science, it is surprising to learn that the first serious attempt to determine the number of sinuses present at birth, and their development through childhood, was made about 1900. Lewis A. Coffin states that in 1900 he could find no literature on the subject and, in order to determine the relationship of the sinuses to certain findings in a group of children, he secured twenty heads and dissected them. Doctor Ashley points out the first case reported by Rees in 1847. There is then a gap of fifty-three years in which this condition was regarded with indifference.

Those of us who live in cities have no idea of the frequency of sinusitis in children. It is a common disease and is general in its distribution. Since the general influenza epidemic of 1918, sinus disease has become much more universal than ever before, because so many of these persons developed acute sinusitis during the disease, which became chronic. Doctor Ashley has pointed to a source of infection in children which is neglected in our literature, namely, the parent. Close contact, the use of mother's handkerchief for baby's nose, the dissemination of the infection during colds, kissing, etc., account in many instances for the frequency of double infections in parent and child.

The understanding of etiologic factors and evaluation of symptoms, such as have been mentioned in this paper, are the features which should be in mind. The physical findings of this disease can be latent and obscure, as well as active and apparent. If we approach our cases with a sense of importance of glandular and metabolic irregularities, in addition to that of hypertrophied tissues and purulent discharge, we may be more likely to treat the cause and not just the effect.

I believe there is a great deal of misinformation about diets. Several years ago I attended the annual meeting of one of our national societies in which Dean and Daniels presented their white rats with sinus disease produced by elimination of vitamin A from the diet. That work was vitally important, and I only decry the clinical application that has been made of it. The importance of that work has been so distorted that diet and vitamin A have assumed undue importance. How often do we see a child who has been fed on a diet which contains no vitamin A? Vitamins are so abundant that it would be very difficult to avoid them.

There has also crept into our minds something about mucus-forming diets. I have several times been asked to see children with sinusitis who were on a diet in which certain foods were eliminated because they produced mucus. Generally these cases were allergic and so, of course, excessive mucus and not pus was present. There is no diet of any kind which is mucus forming. If a child is on the regular diet for his age, I do not believe there is any need for alteration in sinusitis.

Allergy must be ever present in our minds. The differentiation between allergy and infection is ordinarily quite easy. The important point is that allergy is general and infection is local, even though the symptoms and findings may center about the nasal tissues. In one, local treatment is palliative and operation rarely successful, and in the other, treatment is effective and operation, when necessary, effective.

J. ROY JONES, M. D. (California State Life Building, Sacramento).—"Truth will not make us rich, but it will make us free." Free, indeed, will be the profession when the truths of sinus disease in children are known.

The author has lucidly reviewed the subject and given of his experience in the treatment of such cases. That it pleads for conservatism will meet the approval of nearly all.

Doctor Ashley justly stresses the value of roentgenograms as an aid to diagnosis, since they often reveal pathology when, clinically, it is not apparent. That the x-ray is commonly misleading is likewise apparent. Since very early infection may prevent later pneumatization and development of the sinuses, the radiogram is of inestimable value, too, in revealing this point.

In the treatment, I have used for several years the warm neosilvol packs with generally very good results. Even with some, when surgical interference seemed called for, they have responded. Some of those with allergic rhinitis, at least so diagnosed, responded well; but generally this type of case was irritated and packing abandoned.

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FRANCIS M. SHOOK, M. D. (Medical Building, Oakland).—Secretion in the maxillary antra is removed by the wave-like, rhythmic motion of cilia of the epithelial lining membrane. If these cilia are damaged by an overload of secretion, or by bacterial toxins so that their motility is lost, stasis of secretion takes place. Stasis of secretion in any of the body cavities favors secondary infection with resultant damage to the more highly specialized cells. This is the initial stage of chronic maxillary antrum infection, and it is this initial stage which frequently is not diagnosed in adults and children. If the condition has been present more than three months, the local measures such as ephedrin or packs are of little value. With ether or nitrous oxid anesthesia, drainage openings should be made beneath the inferior turbinates into the infected antra. The after-treatment consists of weekly cleansing of the antra through a small silver canula, which has been passed into an antrum through the surgical opening. This cleansing may be done by irrigation with warm normal salt solution, or by a suction pump, or both. The recovery is rapid and complete if the infection is not of long standing, and if the child's tissue and physique are normal. Another story may be told if they are not. If an antrum contains thickened and infected mucous membrane or polypi, treatment by simple surgical drainage, with an after-treatment directed to a repeated cleansing of the cavity, will cause improvement; but recovery will not take place unless the infected antrum is opened and the diseased tissue removed by an operation of the Luc-Caldwell type.

RESISTANCE TO EATING AMONG PRESCHOOL CHILDREN*

By HERBERT R. STOLZ, M. D.
Berkeley

DISCUSSION by Esther B. Clark, M. D., Palo Alto; J. R. Jimerson, M. D., Long Beach; Ina M. Richter, M. D., Santa Barbara.

RESISTANCE to eating is reported by parents and by physicians as a common occurrence among children of preschool age. Every pediatrician, and every general practitioner who deals with children, is familiar with the mother's complaint that her child has to be forced to eat. Sometimes the resistance is toward eating as an

* From the Institute of Child Welfare, University of California, Berkeley.

* Read before the Pediatric Section of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

activity; sometimes the problem is restricted to the eating of specific foods deemed necessary for normal growth.

In pediatric clinics lack of appetite is frequently the principal complaint. The data collected by Bartlett¹ show that this was the chief problem reported by the mother in about one-quarter of the pediatric cases in a representative out-patient series. Anderson and Foster² report that problems connected with feeding were present in 30 per cent of a random sample of one hundred preschool children. In our cumulative study of a representative sample of young children in Berkeley, we find resistance to eating reported for over 30 per cent at two years, and for over 50 per cent at three years. These figures refer only to cases in which lack of appetite or resistance to specific foods was chronic over a period of weeks or months.

Others have presented an analysis of the physiology of hunger and its relation to the psychological phenomena of appetite. Clinicians have pointed out the association of anorexia with constitution, with allergic status, with chronic infection, and with poor nutritional regimen. The importance of psychogenic factors has been emphasized by both pediatricians and psychologists. Practical programs for the prevention of anorexia have been suggested by Aldrich³ and others.

Although the treatment of a given case of resistance to eating will remain a clinical problem for the individual physician to work out, certain conclusions in regard to the probable causes of the condition may be suggested by a statistical study of a considerable number of preschool children; and it is my hope that this report of such a study by the Institute of Child Welfare at the University of California will be of some value to the physicians who must advise parents as to appropriate treatment.

MATERIAL FOR THIS CLINICAL STUDY

Our initial experiences were obtained, with the coöperation of the obstetricians of Berkeley and Oakland, by choosing every third child born to residents of Berkeley over a period of eighteen months. Careful comparison has shown that these families and these children were truly representative for that community as to race, education, socio-economic status, size of the family, ages of the parents, prenatal care of the mother, and as to a number of other criteria.

Commencing during the second month after birth, a public health nurse visited each family three or four times a year until the child was three years old. At each visit she collected, systematically, data concerning development, nutritional status, sickness, medical supervision, daily regimen and behavior problems. At twenty-one months, 250 children remaining in the survey were given careful physical examination and mental tests, and the disease history was again obtained from the mother.

During the period from twenty-one months to thirty-six months, approximately 125 of these children were studied by guidance-clinic methods with especial emphasis upon matters of behavior, in-

cluding food resistance. An inventory of their problems was made every three months during the period. All of the children remaining in the survey were medically examined and mentally tested at thirty-six months. They are still being followed, but the data presented in this paper are based upon the nurses' records and the Institute examination records for the period of twenty-one to thirty-six months, inclusive. At these two extremes, the sample numbers something over two hundred children. At the intermediate points, the data are upon something over one hundred cases. The peculiar value of the findings rests upon the fact that the same children were followed before and throughout the fifteen-month time span.

CHILDREN DIVIDED INTO TWO GROUPS

From the start those children who showed resistance to eating were classified in two groups for purposes of study. In one group were placed those who showed a lack of normal appetite for any food. These were labeled anorexic. The second group included those who displayed normal appetite for some of the common foods, but who were resistant to specific foods such as milk, green vegetables, meat, fruit, and so on. For want of a more distinctive term these children were labeled "finicky." That the difference between anorexia and finickiness is truly qualitative rather than merely quantitative has been recognized by pediatricians, and is clearly evident from the analysis of our data.

Table 1 gives the per cent of children who were finicky and the per cent who were anorexic at twenty-one, twenty-four, thirty, and thirty-six months, together with similar data for certain other common behavior problems. It is evident that there is a marked difference in the incidence between the two types of resistance to eating. Among these children chronic anorexia did not appear as a frequent difficulty; at twenty-one months the per cent was eleven; at thirty-six months twenty-six. The incidence at intermediate points was of the same general order of magnitude among the guidance group.

The incidence of finickiness was much higher: 28 per cent at twenty-one months and 45 per cent at thirty-six months. One may generalize that while finickiness occurred in over 25 per cent of the cases at all ages between twenty-one and thirty-six months, anorexia was, as a rule, reported for less than 10 per cent.

Speaking in comparative terms, finickiness ranks with thumb-sucking as one of the most conspicuous and persistent behavior problems for the group as a whole. At twenty-one months it is exceeded in frequency of occurrence only by nocturnal enuresis, diurnal enuresis, and temper tantrums. On the other hand, anorexia is not conspicuous among the problems of which the mothers complained. As to frequency, it belongs in the same class with constipation and hyperactivity.

The period for which the data are given is so brief that little can be said regarding incidence in relation to age. The only striking feature of the table is the marked abrupt rise in occurrence of both anorexia and finickiness at thirty-six

TABLE 1.—Comparative Incidence of Finickiness, Anorexia and Certain Other Behavior Problems from Twenty-one Months to Thirty-six Months

PROBLEM	GUIDANCE GROUP Percentage Incidence at				CONTROL GROUP Percentage Incidence at	
	21 months	24 months	30 months	36 months	21 months	36 months
Anorexia.....	11	4	7	26	8	4
Constipation.....	13	11	10	5	(Not Studied)	
Hyperactive.....	7	6	11	10	22	35
Finicky.....	28	28	25	45	34	40
Nocturnal enuresis.....	66	47	25	17	75	25
Diurnal enuresis.....	47	24	10	4	53	4
Thumb-sucking.....	28	28	29	19	28	26
Temper tantrums.....	44	28	35	39	52	66

months among the so-called "guidance" group. The children are not grouped by sex because there was no relation between sex and either type of food resistance.

It has been pointed out that the problem of food resistance persists throughout the period. The question arises as to whether it persists in the same children or whether, as some leave the ranks, others join the army of objectors. Among these children, at least there was a considerable turnover. Thus, although the average percentage incidence for finickiness was between 25 and 30 per cent, there were 63 per cent of the guidance group who were classed as finicky at some time during these fifteen months. The average incidence of anorexia was about 10 per cent, but 35 per cent of the children were so classed at least once.

By taking advantage of the frequent habit inventories, it is possible to arrive at an even better judgment as to the persistence with which these habits cling to their victims. For the guidance group, problem inventories were taken at twenty-one, twenty-four, thirty, and thirty-six months. By selecting those cases which displayed the problem of anorexia during three or four consecutive periods, and comparing this number with the total number of cases of anorexia, an index was obtained which showed the degree to which this trait adhered to the individuals concerned. The same computations were made for finickiness and for other traits. A trait which always appeared in at least three consecutive inventories would score 100. Actually, no behavior problem gave such a perfect coefficient of adherence. The highest coefficient, 71, was for thumb-sucking. Hyperactivity scored 30; nocturnal enuresis 28, temper tantrums 26, constipation 23, finickiness 17, and anorexia only 6. Thus, as habits go, the persistence of finickiness in any individual child was moderately low and the persistence of anorexia was very low. In terms of individuals there were: 9 out of 102 reported as finicky during the entire fifteen-month period; 38 out of 102 never reported as finicky during the period; no child reported as anorexic during the entire period; 66 out of 108 reported as free from anorexia during the entire period.

CAUSAL FACTORS

In a search for possible causal factors or related traits, we have investigated the relation of anorexia and finickiness to each other, and also the relation of each of these to a number of other

characteristics of the children and their mothers. The correlation method was used.

We found that there was a slight positive relation between anorexia and finickiness, but that, whereas children who were anorexic at one time were slightly more apt to be finicky than children with normal appetites, the reverse did not hold true. Children classed as finicky were no more apt to develop anorexia than those who were not fussy over any food.

We found that there was no relation between finickiness and nutritional status as rated by the examining physician upon weight, amount of subcutaneous tissue, muscle tone, tissue turgor and general impression. There was, however, a significant relation between nutritional status and anorexia. Thus only one-third as many anorexic as normal children were rated as markedly above average in nutritional status; only one-half as many anorexic as normal children were rated as definitely above average; twice as many anorexic as normal children were rated as definitely below average in nutritional status.

For this group there was no relation between intelligence test scores and either type of resistance to eating.

Among the data collected concerning these children are records of illness from birth on. These were collected at least three times in each year. From these records I have rated each child upon a five-point scale as to the probability that illness was or was not a factor which modified its development. The rating was based upon frequency, duration, kind and severity of illness, and was made independently without reference to the child's eating habits. When the two sets of records were brought together and statistically compared, it was found that there was a definite and significant relation between anorexia and illness, and a somewhat less marked positive relation between illness and finickiness. Thus, of those who suffered from no illness during the second year, no child was reported as anorexic at twenty-one months; of those who suffered several slight illnesses, 7 per cent were reported as anorexic at twenty-one months; of the thirty-eight children who suffered from illnesses deemed significant in their development, 20 per cent were among the anorexic at twenty-one months. Similarly, there was a definite rise in finickiness among the children who suffered from frequent or severe illness.

Upon the assumption that resistance to eating is but a symptom of a general tendency toward undesirable behavior, we have compared its incidence with the total number of problems connected with each child at any given time. Here, also, a definite positive correlation was obtained. The average finicky child is reported as displaying two more problems than the average nonfinicky child, and the average anorexic has one and a half more problems than the normal eater.

Turning our attention to the mother, we find no relation between her education and the food resistance of her child at this age period. There was a slight positive relation between finickiness in the offspring and nervous instability in the mother as rated by clinic and social case workers who had known her for a period of several years. The same order of weak positive relation was found between birth order and finickiness. Second, third, and fourth children were a little less likely to be finicky than were first-born children. This was not true for anorexia.

COMMENT

These were the findings so far as they have been worked up. Obviously, there is nothing startling in them and perhaps the gaps in our information are the most conspicuous feature. Some of these gaps will be filled in as the assembling of data proceeds. In the meantime, there seem to be a few fairly definite conclusions and a number of suggestions arising from the findings in this survey.

The differences between anorexia and finickiness seem to cast doubt upon the desirability of classing these two problems together for purposes of either diagnosis or treatment. They both show a definite correlation with frequency and severity of illness, but so do other behavior problems. On the other hand, our findings as to the relation of these two types of eating resistance to nutritional status may perhaps explain the diversity of opinion which has existed about the matter. The anorexics in our study did show definite nutritional inferiority, but the finicky children did not.

I am inclined to interpret the results as indicating that true chronic anorexia is not so common as some reports suggest, nor so persistent in any given child as is sometimes thought. In this sample I cannot find any support for the belief that either anorexia or food finickiness is largely a function of constitutional type, as suggested by Schlutz,⁴ nor can I find any evidence that allergic reaction to specific foods is an important contributing factor in producing resistance to eating.

Unfortunately, there is no way of measuring the intensity of hunger and appetite, but the intermittent character of both types of resistance to eating suggests that these biological stimuli were adequate except when they were modified or offset by the immediate physiologic effects of illness or by certain psychologic factors. Although I lack satisfactory proof, it is my impression, gained from examining these children, studying their records, and talking to their mothers, that, so far as finickiness is concerned, the most important cause

lies in the oversolicitation of the mother regarding the feeding of her children. The persistent attempt to force the child to eat certain quantities and certain foods creates a situation in which the child finds himself in a peculiarly strategic position for getting attention and for asserting his independence. In a few extreme cases the resistance to eating becomes a major issue which persists for months or years, and which may have far-reaching physiologic and emotional consequences. I have in mind one small three-year-old who has tyrannized her young parents for over a year, and who uses the technique of vomiting with such effect that the whole household revolves about her. I am even informed by her mother that the child has arrived at that stage of proficiency where she can regurgitate a specific food without losing the balance of the meal. I do not vouch for the scientific accuracy of the report.

IN CONCLUSION

Apart from these extreme cases of patients who usually require complete reëducation away from home and mother, it seems to me that attempts at prevention and treatment should be focussed primarily upon two objectives: to shield the pre-school child as well as possible from frequent or severe illness, and to instruct the mother concerning the probable effects of forcing or coaxing the child to eat. I do not believe that, in the absence of chronic disease, either food fussiness or anorexia often leave any permanent effect in terms of physiologic or anatomic modification, but certainly they represent critical points in the training of youngsters and perhaps in the development of unsound parent-child relations. As such they are deserving of careful attention from pediatricians, as well as from students of child behavior.

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DISCUSSION

ESTHER B. CLARK, M. D. (300 Homer Avenue, Palo Alto).—Doctor Stolz has made an excellent objective correlation of the relation of eating resistance among children to possible causative factors and other behavior problems. The demonstration of the relation of anorexia to a preceding illness is of great importance, and should serve as a key to the possible prevention of the development of resistance to eating. After a child has been ill, it is a natural tendency for the mother to wish to feed him up so that lost weight and strength may be rapidly regained. However, it is common experience that, after an illness it may be a long time before real hunger returns, and if a child is continually having undesired food urged and forced on him during a convalescence, he may build up such a conditioned reflex of distaste or nausea associated with food that the anorexia persists on a psychological rather than a physiological basis. Also, during such a convalescence the child may become aware of the very pleasant stir and discussion he is capable of creating by refusing to eat.

I believe with Doctor Stolz that "finickiness," and at times real anorexia, are directly due to an overly anxious mother trying to administer her conception of a suitable diet to the child. The experiments of Doctor Davis in Chicago in allowing children to select their own diets are a demonstration of the latitude which should be allowed in variety and quantity of food which may be given a child. A child will not offer resistance to eating, if he is selecting his own diet—a procedure which is entirely reasonable to allow at home, within certain limitations.

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J. R. JIMERSON, M. D. (1723 East Third Street, Long Beach).—In 1927 Aldrich stated that "statistics as to the prevalence of anorexia are few in spite of its widespread occurrence." The author and others are to be congratulated on adding this painstaking statistical study to the already accumulated literature concerning this annoying biological phenomenon. Good, round figures have a tendency to dispel or strengthen, as the case may be, certain impressions concerning our daily problems.

The classification of types is interesting, but I do not feel that it will hold either with a large series of cases or with the opinions of other authors. May I offer, therefore, three excerpts for contrast: 1. The anorexics in our study did show definite nutritional inferiority, but the finicky children did not (author). 2. The table indicates that in the entire group of 199 children there were none seriously underweight because of poor appetite alone (Aldrich). 3. Now anorexia is not an occasional occurrence—the lowest estimate of its incidents in private pediatric practice is 50 per cent—the children are commonly malnourished, either quantitatively or qualitatively, more often both (Brenneman).

My personal reaction toward a case of this nature is a prayer that the unfortunate child be committed to the care of Dr. Clara Davis or the Elysian Fields of Dr. Joe Brenneman, "where sunsets are gorgeous and plainly visible."

A certain successful pediatrician in a neighboring metropolis affords the service of an individual trained in the special field of child and family psychology. The individual's hunter's green uniform, cocked hat, and beaming countenance are sufficient to disarm the most hostile and doubting parent. Esoteric as the results may be, I feel confident that Doctor Stolz is striking at the seat of the problem.

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INA M. RICHTER, M. D. (La Loma Feliz, Santa Barbara).—It is indeed interesting to get data on this important question from a new source. In such a study a much more natural setting is obtained in which to observe the child's habits than obtains when he is referred to the physician's office or out-patient hospital department. Although statistics from the latter sources show a high percentage of the condition, Doctor Stolz's figures confirm the belief that the habit is quite prevalent.

The division into true anorexia and finickiness is helpful in the classification and handling of these children. The finicky eater generally rapidly overcomes his aversion to food when placed in an environment in which he can no longer be the center of attraction. The true anorexic is much more difficult to handle. As stated, this condition is more frequently seen in the undernourished child who develops other faulty habits following some illness. Each instance must then be handled as an individual problem.

I cannot entirely agree with Doctor Stolz that there is no constitutional factor. The child with an inherited nervous instability seems more apt to acquire this condition, and to be more difficult to handle even when removed from his environment. The discrepancy here, however, between Doctor Stolz's figures and those of others may lie in the difference in the sample of children studied.

I await with interest further data as to the length of time the condition persists in his children, and his method of overcoming this habit.

TERMINATION OF PREGNANCY IN ECLAMPSIA*

By DONALD G. TOLLEFSON, M. D.

Los Angeles

Discussion by Alice F. Maxwell, M. D., San Francisco; Sterling N. Pierce, M. D., Los Angeles; E. M. Lazard, M. D., Los Angeles.

THE incidence of eclampsia has greatly decreased since the advent of proper prenatal care. Patients with toxemia in the last trimester of pregnancy are being hospitalized and symptoms controlled by conservative measures. The series to be analyzed was taken from the records of the Los Angeles County General, the California, the Cedars of Lebanon, and the Hollywood hospitals from 1926 to 1932, inclusive. All cases have received the usual conservative treatment, including intravenous magnesium sulphate. The disease in most instances has been treated as a medical complication of pregnancy. Authorities agree quite universally that patients with preëclamptic toxemias which do not respond to treatment should have their pregnancies terminated. In a large series of cases, excellent results are reported. The use of cesarean section in eclampsia is generally considered inadvisable while convulsions continue; however, most authors state that occasionally in fulminating cases abdominal section might be considered. High mortality is reported for cesarean section in eclampsia, but little is said of the mortality when delivery is accomplished by vaginal operations. It must also be remembered that section frequently is a final gesture of despair, in the treatment of these acutely ill patients, and is often successful.

WHEN SHOULD DELIVERY BE ATTEMPTED

Many cases of eclampsia are prevented by termination of pregnancy in preëclamptics; yet the use of active operative procedure is said to be contraindicated when convulsions have occurred. When should the delivery be attempted, and what method should be employed?

The following factors, in the order named, are the usual accepted evidence of progress in conservative therapy:

1. Control of convulsions;
2. Return of consciousness;
3. Increase in urinary output;
4. Heart and lung efficiency;
5. Reduction of blood pressure;
6. Decrease in amount of albumin; and
7. Reduction of edema.

The control of convulsions has been greatly facilitated by the use of magnesium sulphate, intravenously. Since 1926 Lazaard, McNeile and others have commented on its use. In this series of 173 cases, convulsions ceased after injections of the drug were started in forty-nine patients. In sixty-five, one convulsion occurred after the medication. In eighty-two, two or more convulsions persisted after the use of this drug. In twenty-nine, the information was not obtainable

* Read before the Obstetrics and Gynecology Section of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

TABLE 1.—Incidence of Eclampsia			
	Private	General	Total
Deliveries	14,578	8,915	22,493
Eclampsia	52	173	225
Incidence	0.3%	1.9%	1.0%
Deaths	3	22	25
Mortality	5.8%	12.6%	11.1%
Cesareans	18	28	46

or treatment was insufficient. A conservative estimate would be that in 50 per cent of the patients convulsions were controlled. The prevalent view that the number of convulsions does not always affect the prognosis is substantiated in this study.

Persistent coma seems to be a very dangerous symptom, and when it persists after convulsions are controlled for twenty-four hours, it is even more suggestive of a fatal outcome. Increased urinary output is a most favorable indication. Persistent, rapid pulse and pulmonary edema seemed to forestall induction or termination of labor with great frequency. Reduction of blood pressure was variable both as to prognosis and indication for interruption. Albumin seldom affected the method of treatment. Disappearance of edema was only favorable with increased kidney output.

The period of gestation is often one of the deciding factors for interference. The desire for a living baby sometimes causes great delay in delivery. To delay termination for the life of a probably toxic fetus seems to be extremely dangerous. In ninety-one of this group, the period of gestation in calendar months was eight or less. Eclampsia for this discussion does not include convulsions occurring before six calendar months.

Parity of the patient will affect the method and time of termination in many instances. The induction of labor in a primigravida, with a long, rigid, uneffaced cervix, is indeed a difficult, prolonged and dangerous operation. Even in multiparous patients induction of labor is not always certain. A slow labor and other complications often follow

bag inductions, and yet this is a favorite method in many clinics. Some success may be obtained with castor oil, quinin, and intranasal pituitary solution. Rupturing of the membranes may be sufficient in others. Dührssen's incision and dilatation of the cervix, so often necessary, may turn out to be truly major operations.

ANESTHESIA

Of no less importance is the type of anesthesia employed. Stander has shown that general anesthesia adds considerable toxemia to the already toxic patient. Local anesthesia, both for vaginal and abdominal deliveries, should be the anesthetic of choice. DeLee and his followers have been advocating infiltration anesthesia and have large series to support their enthusiasm for its advantages. The use of small amounts of nitrous oxid as the child is extracted will be necessary in only a small percentage of cases. In delivery from below infiltration of the perineum along the line of episiotomy incision, and blocking the nerve supply of the levators through the ischiorectal fossa, render even difficult forceps possible without the addition of general anesthesia. Next to local, spinal anesthesia can be used and has many advocates; but the simplicity of local infiltration makes its use most advantageous. Only four patients were given local and ten spinal anesthesia in this group of cases.

The incidence of eclampsia as shown in Table 1 corresponds to that reported by Williams of Baltimore. The increased incidence in the General Hospital indicated the importance that prenatal care must play in the prevention of this condition.

Castor oil, quinin, and bag induction were frequently used, but the procedure in Table 2 refers to the method finally adopted for the actual delivery of the infant.

Many patients were controlled and allowed to go for considerable time before pregnancy was terminated. Twelve deaths occurred in the seventy-nine patients that were in labor, or delivered within

TABLE 2.—Method of Delivery					
Procedure	Antepartum		Postpartum		Total
	P*	M*	P	M	
Spontaneous	49	24	18	20	111
Bag induction.....	3	8	0	0	11
Forceps	30	2	4	2	38
Breech extraction.....	2	4	0	0	6
Version	1	1	1	..	3
Accouchement force.....	4	2	0	0	6
Low cervical.....	14	3	3	0	20
Classical	19	2	4	0	25
Porro	1	0	0	0	1
Vaginal section.....	1	0	0	0	1
Postmortem section.....	1	0	0	0	1
Undelivered	1	1	..	..	2
*P = Primigravida. *M = Multipara.					

TABLE 3.—Duration of Hospital Treatment of Antepartum Cases

	Para*	M	Total	Deaths
0-6 hours inclusive	25	6	31	2
6-24 hours inclusive	33	15	48	10
24-48 hours inclusive	22	4	26	1
2-3 days inclusive	14	6	20	3
More than 3 days	30	15	45	3

Para*=Primigravida.
M=Multipara.

twenty-four hours of admission. In ninety-one, in which hospitalization was longer than twenty-four hours, seven deaths occurred. One of these was carried one month, others five and eight days respectively. However, several patients carried for the same length of time and in some instances longer, delivered spontaneously and without fatality. It is of interest to note that the private antepartum cases were treated for an average of forty-seven hours, while the General Hospital cases were observed for eighty-two hours before delivery was accomplished or occurred.

MORTALITY

The mortality has been divided into three groups, namely, the spontaneous deliveries, cesarean sections, and the vaginal operations. Under the latter group we have bag induction, forceps, breech extractions, versions, accouchement force, and one vaginal section. There was one post-mortem cesarean moribund on admission. Two cases died undelivered; both in extremes when admitted. These three cases are not considered further in this discussion except to include them in the twenty-five deaths.

In Table 4 we note a mortality of 5.4 per cent in the spontaneous group and 12.6 per cent in the abdominal section cases. If we consider only the antepartum cases where the indication for termination was eclampsia, we have a mortality of 5.4, 12.8, and 17.8 per cent in the three groups, respectively. It also shows that in sixty-five cases where some vaginal operation was done that the mortality was equal or greater than by abdominal section. A conclusion cannot be drawn from this statement that cesarean is less dangerous, but that

TABLE 4.—Procedure and Mortality

Number of Cases	*Spont. 111	*Abd. Sect. 46	*Vag. Op. 65
Antepartum P	1	5	5
M	3	0	5
Postpartum P	1	1	0
M	1	0	0
Total	6	6	10
Mortality per cent....	5.4%	12.60%	15.3%

*Spont.=Spontaneous.
*Abd. Sect.=Cesarean section.
*Vag. Op.=Vaginal operation.

in this particular group of patients vaginal operations carried the highest mortality.

There were fifteen primigravidae and ten multiparae that died of eclampsia, a mortality of 9.6 and 14.5 per cent, respectively. In the primigravidae the spontaneous deliveries were only 42 per cent, while in the multiparae there were 63 per cent without operative interference. With fewer operations the mortality for multiparae was higher than in the primigravidae where operative procedures were more frequent. Of the six deaths with spontaneous deliveries three had additional complications—pneumonia, coronary sclerosis, and cerebral hemorrhage, respectively. In the other three, two were postpartum; one delivered at home of twins had two convulsions before admission and six after, dying twenty-six hours postpartum. The other, a fulminating toxemia, was in extremes on admission. The sixth case was in the hospital seven hours before delivery, having had twenty convulsions before admission in deep coma. She had had no prenatal care, and was considered moribund on entrance to the hospital.

In the abdominal section group all deaths were in primigravidae. Lung abscess, cerebral hemorrhage and accidental hemorrhage, in addition to eclampsia, account for three deaths occurring in three antepartum cases. The fourth patient was

TABLE 5.—Cesarean Section in Eclampsia (Lull)

	Cases	Mortality Per Cent
Cleveland	45	20.
Brooklyn	104	26.
Los Angeles	46	28.
Philadelphia	14	35.7
Total Cases	209	Av. 25.8%

operated while she had pulmonary edema and was in coma, and another observed five days was sectioned, but died four hours later. A patient with a fulminating toxemia died forty-eight hours after abdominal section, having had numerous small convulsions. This case is representative of that group where, regardless of treatment, death seems certain. A postpartum hemorrhage following cesarean section caused the sixth death in this group.

Our cesarean section mortality is lower than Lull's collective series, as shown in Table 5.

In the ten patients having vaginal operations who died, four were due to postpartum hemorrhage, three from cervical lacerations, and one from the placental site. Two were in shock on admission; type of delivery may or may not have been the causative factor. Two others had almost complete anuria. Persistent coma in another, and possible acute alcoholism in addition to eclampsia explains the tenth death. Mortality should not be corrected, but statistics seem to indicate that when delivery is imperative even in the hands of the average physician, the safer procedure is not always vaginal delivery.

In classifying eclampsia Eden designates as severe any case in which two or more of the following symptoms are present: (1) prolonged

coma; (2) pulse rate above 120; (3) temperature 103 degrees Fahrenheit or higher; (4) blood pressure above 200 millimeters; (5) more than ten fits; (6) 10 grams or more of albumin in the urine; (7) the absence of edema. In this series sixty-seven were classified as severe, while 158 were mild cases. The mortality of the mild cases was 5 per cent and 40 per cent for the severe type.

CONCLUSIONS

1. All eclamptics may be treated conservatively for a period of time, depending on their reaction to treatment. Delay in patients not responding invites disaster.

2. The duration of conservative management should not be so long that termination of pregnancy must be done on poor surgical risks.

3. The type of procedure depends on parity of the patient and the condition of the cervix. Forcible delivery through the natural passages will carry an alarming mortality and even greater than cesarean section.

4. Termination of pregnancy in toxic patients should be done under local anesthesia, and this is undoubtedly the greatest advance in the treatment of this condition in recent years.

5. Period of gestation should not influence the decision of when to end the pregnancy, once convulsions have occurred and have been controlled.

6. A patient with eclampsia has two conditions to treat, a toxemia and pregnancy.*

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DISCUSSION

ALICE F. MAXWELL, M. D. (University of California Hospital, San Francisco).—The problem of eclampsia remains a vital and elusive subject in spite of many years of intensive and extensive investigations. Numerous theories have been advanced to explain the syndrome, but the underlying factor or inciting mechanism which precipitates the disturbance is an unsettled, yet basic consideration. The treatment of eclampsia must of necessity be empirical until such time as the knowledge of its etiology will permit the application of preventive or curative measures, which would invariably maintain or restore the normal balance of the pregnant woman.

Recent advances in the field of endocrinology, and particularly the rôle of the hypophysis in body functions have served to redirect attention to the possibilities of dysfunction of the pituitary as a vital factor in the problem. The isolation of pressor and antidiuretic substances in the blood of women with a pregnancy toxemia, the identification of these substances with those derived from the posterior lobe of the pituitary, the absence of these secretions from the blood of normal pregnant and nonpregnant individuals open up a promising lead in a field practically unexplored. The improved recognition of the function of minerals in the body, and the alteration of Ca balance in eclamptics, suggest further promising lines of investigation.

Experience has established the importance of prenatal supervision as a valuable prophylactic measure. The author has emphasized the fact that there is no uniform standardized method of treating women with eclampsia; each patient presents an individual problem. Therapeutic measures must be based upon knowledge acquired by clinical observation, and must be modified by the response of the patient to these methods. It is essential to bear in mind the direct relationship

which exists between the reaction to palliative measures and the maternal prognoses, both immediate and remote. The permanent kidney damage which occurs in at least 20 per cent of eclamptics refutes the validity of unduly long-expectant treatment. When the interest of the woman demands termination of the pregnancy, the method selected must be influenced by the presence or absence of mechanical problems, parity and experience, etc. In general, radical measures for terminating pregnancy have in recent years been supplanted by conservative procedures—a policy which has served to reduce maternal mortality. Conservatism does not imply inactivity. The truly conservative obstetrician is the individual who knows how and when to be radical.

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STERLING N. PIERCE, M. D. (1930 Wilshire Boulevard, Los Angeles).—The author's review of the subject-matter helps to throw light on the present status of treatment and the results obtained in eclampsia. I feel that we should all read with particular interest the conclusions he has drawn; conclusions which are indeed logical. We should focus our attention especially on two of his conclusions: first, that in cases of eclampsia where pregnancy must be terminated, the mortality rate is considerably lower where abdominal section is done than in vaginal procedures; secondly, his remarks regarding local anesthesia are deserving of a great deal of attention. These and all of his conclusions are backed with sound reasoning, and based on statistics gathered from 225 cases of eclampsia out of 22,493 deliveries.

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E. M. LAZARD, M. D. (1930 Wilshire Boulevard, Los Angeles).—The author's statistical analysis of the results of the termination of pregnancy in eclampsia, serves to emphasize conclusions which now seem to be pretty well established, viz., first, that efficient prenatal care is of the utmost importance in reducing the incidence of eclampsia; second, that in a disease so protean in its etiology and pathology, no fixed routine can be successfully employed, and that the time to terminate pregnancy in the preëclamptic toxemias is a matter of ripened clinical judgment.

The factors mentioned as indicative of satisfactory progress in the medical treatment of the toxemia can be accepted as safe guides in continuing conservative therapy. I would like to add the suggestion, that while the patient is under conservative treatment every effort should be made to establish the exciting cause of the toxic attack, and if possible to eradicate it.

In the absence of satisfactory progress in the preëclamptic, when it seems necessary to terminate the pregnancy of labor, the method to be adopted should be dependent on the obstetrical conditions present.

The analysis of the mortality rates in the three groups—spontaneous deliveries, vaginal operations, and cesarean sections—shows a higher mortality rate for the vaginal operative group than for the cesarean section group. This, I believe, gives an incorrect idea unless the vaginal operative group be further analyzed with especial reference to the condition of the cervix. Statistics show that the now practically obsolete accouchement force in these highly toxic patients gave the highest mortality rate. To include with these operations properly indicated forceps operations or version and extraction after complete dilatation of the os, gives too unfavorable an idea of these latter procedures.

That cesarean section has a definite place in the treatment of these cases, there is no doubt, but its place must be decided by obstetrical indications rather than as a treatment of the toxemia itself. This analysis also shows that it is usually possible to treat the active eclamptic successfully without resorting to operative procedures until the active eclampsia is controlled, unless the patient be in active labor and presents some urgent obstetrical indication for interference.

* The author wishes to thank Drs. E. M. Lazard and Lyle G. McNeile for the use of histories of patients occurring on their services at the Los Angeles County General Hospital.

POLYNEURITIS ASSOCIATED WITH VOMITING OF PREGNANCY *

By MARK GERSTLE, JR., M. D.

AND

SALVATORE P. LUCIA, M. D.
San Francisco

DISCUSSION by H. Douglas Eaton, M. D., Los Angeles;
Karl L. Schaupp, M. D., San Francisco.

POLYNEURITIS, following the vomiting of pregnancy, is of special interest since it is associated with faulty metabolism and changes in the nervous system, some of which are irreversible. The preponderance of evidence indicates that the cause of this syndrome is either an inadequate ingestion of vitamins or the inability to metabolize these substances properly, even though they be present in the diet. Polyneuritis might be prevented during pregnancy by the administration of prophylactic diets; and even when the disease manifests itself, improvement may be anticipated by the use of a high vitamin intake.

It is noteworthy that the first case of polyneuritis associated with psychosis reported by Korsakoff¹ developed after pregnancy. Whitfield,² von Hösslin,³ Ely,⁴ Albeck,⁵ Hofmann,⁶ Weill-Hallé and Layani,⁷ Ledoux,⁸ Dupouy and Courtois,⁹ and Berkwitz and Lufkin,¹⁰ concluded that polyneuritis associated with pregnancy is frequently related to hyperemesis gravidarum.

POLYNEURITIS AND DIET DEFICIENCIES

Interest in the interrelationship of polyneuritis of all types and dietary deficiencies was greatly stimulated by Wechsler,¹¹ who published a preliminary report on this subject in 1930. In a more recent publication, Wechsler¹² reports five cases of polyneuritis in which the diagnosis and the decisive etiologic factors are given. One of these cases followed vomiting of pregnancy and showed the typical findings consistent with the diagnosis, as well as a remarkable and rapid improvement after the administration of a full diet, rich in vitamins. Strauss and McDonald¹³ report three similar cases and state that: "(1) The polyneuritis of pregnancy is probably a dietary deficiency disorder similar to beriberi. (2) Rational therapy should aim to supply the deficiency, which may be especially some portion of the vitamin B complex; large amounts of concentrates of this substance are advised."

REPORT OF CASE

The following case, similar to those of Wechsler and Strauss and McDonald, is reported:

Mrs. R. H. A., American, age 22 years, was admitted to Mary's Help Hospital, San Francisco, on December 5, 1932, complaining of inability to use her legs (duration, four days), a "dead feeling" below the waist (duration, four days), and painful sensations throughout the upper abdomen (duration, three days).

The family history and past history are essentially irrelevant, there being no history of exposure to exogenous toxins or the habitual use of alcohol. The patient states that she was perfectly well until the

middle of August, 1932, (three and one-half months before entrance into the hospital), at which time she became pregnant. The pregnancy was characterized by almost continuous vomiting and a loss of thirty pounds in body weight. Two and one-half weeks before entrance the patient aborted spontaneously. Following the termination of her pregnancy the vomiting became less frequent, and the patient began to take food fairly regularly for the first time since the onset of her pregnancy. There were no untoward symptoms until four days before she was admitted to the hospital.

Physical examination on admission: The patient was a rather dulled, moderately intelligent young woman, definitely overweight. She did not appear to be acutely ill. The cardiorespiratory, genito-urinary, and gastro-intestinal systems revealed nothing pathological except for generalized tenderness without rigidity of the upper half of the abdomen.

The essential positive findings of the neurologic examination at this time were:

1. Definite blurring of the optic disks;
2. Markedly diminished power in both arms;
3. Complete absence of all deep and superficial reflexes;
4. Patchy areas of anesthesia and analgesia over both legs and thighs. (The patient was able to perceive touch and pain in many isolated spots between the anesthetic areas);
5. Vibratory and deep-joint sensibilities were absent over the malleoli;
6. Flaccid paralysis of both lower extremities, except that the patient was able to dorsiflex her toes slightly.

The temperature on admission was 100, the pulse 120, and the respiration 22. The urine was negative except for a slight trace of albumin. The blood examination revealed an erythrocyte count of 3.25 millions, hemoglobin of 65 per cent, and 10,600 leukocytes with 76 per cent polymorphonuclears.

On December 8 a spinal puncture was done, the results of which were normal in all respects. The fluid was clear and under normal pressure. The Queckenstedt maneuver was negative. The total protein was 12 milligrams per 100 cubic centimeters. The cell count revealed two lymphocytes, and the stained centrifuged specimen disclosed no organisms.

On December 10 the patient was seen by various members of the hospital staff, and additional findings of vertical and horizontal nystagmus, as well as absence of rectal sphincter tone were noted. On December 11 her arms were observed to be very weak, and for several hours she complained of partial blindness and inability to swallow. A second lumbar puncture was done with similar negative results. The following day she complained of numbness of the left hand, particularly about the tips of the fingers. She suffered from marked dyspnea. The disk margins were still blurred.

On December 14 the patient was considerably more toxic. She was slightly cyanotic, and her respirations were irregular and labored. Because of the severe dyspnea it was necessary to administer oxygen inhalations periodically. There was both rectal and urinary incontinence, and the patient complained of paresthesia and weakness of the hands. The patient was mentally confused, extremely irritable, and had a tendency to confabulate.

Twelve days later a third spinal puncture was done. This likewise showed no evidence of disease. At this time the patient was complaining of pain in her legs as well as numbness and weakness of both hands. On January 9 the patient's general condition had improved. The dyspnea and cyanosis had practically disappeared, and there was partial return of power in her legs. The hands showed considerable atrophy of the small muscles. A fourth lumbar puncture, done at this time, was also negative.

The patient, from this time on, began to show gradual improvement. She regained partial control

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of both sphincters before February 1. The sensory disturbances of her lower extremities gradually diminished. The tenderness of the peripheral nerves still persisted, as well as the atrophy and weakness of the hands. Her temperature returned to normal except for an occasional rise to 99 degrees.

The treatment while in Mary's Help Hospital consisted of bed rest and a high caloric diet, which included the daily ingestion of eight ounces of orange or tomato juice, nine teaspoonsful of Vitavose, and three capsules of Haliver Oil. Physiotherapy, in the form of dry heat was used throughout her stay in the hospital, and from time to time splints were applied to her extremities. On March 8 the patient was transferred to the University of California Medical Service at the San Francisco Hospital.

At that time the physical examination revealed a poorly coöperating, mentally sluggish young woman. The hands and feet were in casts. There was occasional rectal and urinary incontinence. The memory was poor for recent events, and there were evidences of a psychosis of the Korsakoff type. There was persistent lateral nystagnus and bilateral optic neuritis. The gums bled freely and the tongue was smooth. The cardiorespiratory and gastro-intestinal systems revealed nothing abnormal.

After removal of the casts it was noted that, besides a flaccid paralysis of all extremities, there was hyperextension of the metacarpophalangeal joints associated with marked atrophy of the thenar, hypothenar, and interosseous spaces. The patient was unable to move any joint below the elbows. The feet were immobile and edematous, and the legs were markedly wasted. The deep reflexes were unobtainable. Because of the hyperesthesiae, the Babinski and Oppenheim maneuvers could not be elicited. Examination of the blood resulted in normal findings. The blood serum Wassermann reaction was negative. A barium enema revealed no abnormality. The alcohol test-meal provoked a maximum response of 12 degrees of free hydrochloric acid after forty-five minutes.

For the next sixteen days the clinical course was rather turbulent. The patient remained uncoöperative. The temperature varied between 99 and 102 degrees Fahrenheit, the pulse between 90 and 130 per minute, and occasional attacks of dyspnea were noted.

On March 25 the fever subsided and the patient no longer had urinary incontinence. She was able to move her hands slightly. She complained of abdominal pain. One week later, control of the rectal sphincter was regained.

On April 23 she had recovered sufficient use of her hands to enable her to hold a cup, spoon, and fork. From then on she began to feed herself. Movements of the toes and feet became perceptible, and occasionally the patellar reflexes could be obtained. Improvement was slow but steady. The patient gradually acquired some power in the hands; the muscle atrophy, however, persisting unchanged. The patient for the first time was mentally alert, coöperative, and well oriented.

On May 18 the patient was able to support her body weight on her feet for the first time since the onset of the illness. There was still some edema of the feet and ankles. One week later she was able to walk, using chairs and other fixed objects for support. On June 8 a leukocytosis of 15,200 was noted, with 48 per cent polymorphonuclears and 40 per cent lymphocytes.

On June 12, the day of discharge, the patient was free from all subjective complaints. The margins of the right optic disk were still indistinct, and fine lateral nystagmoid movements were present in this eye. Although the patient was able to walk with support, she still had a bilateral foot-drop, more marked on the right. The legs below the knees were cyanotic and cold, and there was excessive perspiration of the feet. There was atrophy of the small muscles of the hands, particularly around the thenar and hypothenar eminences, and some atrophy on the medial surfaces of both thighs, more marked on the right. The patient

was unable to use the flexors and extensors of the ankles. There was marked tenderness on deep palpation over the posterior tibial nerves. All four extremities were flaccid. The deep reflexes were present, but very sluggish. The abdominal reflexes could not be obtained. The Babinski maneuver could still not be elicited because even gentle stimulation of the soles produced excruciating pain. The sensation to light touch was markedly diminished over the tips of the fingers and middle phalanges of both hands. The same regions were also hypo-algesic. There was almost complete absence of epicritic sensation associated with hypo-algesia over both feet, ankles, and lower third of the tibiae. Deep joint sensibility was absent in both great toes. Vibratory sensibility was impaired particularly over the bony prominences of the feet, especially the left.

During her stay in the hospital the patient was given symptomatic treatment in conjunction with a high vitamin diet, yeast, cod-liver oil, and dilute hydrochloric acid.

COMMENT

It is noteworthy that polyneuritis, from whatever cause, has been found to be almost invariably associated with a greatly reduced or even complete absence of free hydrochloric acid in the gastric juice. It is probable that the avitaminosis may be due not only to a lack of ingestion of food, but also to the inability to digest, assimilate, or metabolize it. Quite possibly the presence of the fetus in utero may, in some way, disturb these processes so that polyneuritis may occasionally be encountered in pregnancies, during the course of which little vomiting occurs. Wechsler comments upon the fact that in many cases of polyneuritis, other than those associated with pregnancy, in which the condition is supposed to be due to some exogenous poison such as alcohol, lead, arsenic, or phosphorus, it is usual to find the additional factor of avitaminosis. These toxic substances have a tendency to affect the gastric mucosa, the liver, or both, and very probably interfere with the normal absorption of foods. This conception explains very well why polyneuritis develops in only certain persons, although many are exposed to the same poison.

It is generally conceded that the pathologic changes associated with peripheral neuritis, no matter what the cause, are degenerative rather than inflammatory, and usually involve not only the peripheral nervous system, but the anterior horn cells, as well as some of the motor and sensory tracts in the spinal cord. This is adequately shown in connection with the changes in the central nervous system so frequently associated with pernicious anemia, pellagra, and diabetes.^{14,15}

Although the antineuritic vitamins B₁, B₂ or G, are involved in connection with beriberi and pellagra, no definite evidence has been brought to light to prove conclusively which of the several vitamins is concerned with the more obscure syndromes. There is some experimental evidence to indicate that the absence of vitamin A, and also possibly vitamins C and D, frequently leads to degenerative changes in the spinal cord, the spinal roots, and the peripheral nerves. Probably in the absence of one or several of these vitamins, the presence of some toxin tends to bring about degenerative changes in the nervous system.

SUMMARY AND CONCLUSIONS

1. A case of polyneuritis associated with hyperemesis of pregnancy is reported. This patient showed marked improvement following the administration of a vitamin-rich diet.

2. The pathogenesis of the syndrome of polyneuritis associated with pregnancy is:

(a) Hyperemesis, which produces virtual starvation, thereby depriving the patient of all essential food elements, including the vitamins.

(b) Even in the absence of hyperemesis, the presence of the fetus may conceivably alter the maternal metabolism so as to prevent the adequate absorption of the vitamins which are included in the diet. This may be the case even when these food elements are present in amounts sufficient to prevent the development of polyneuritis in the nonpregnant woman. In other words, it is possible that the presence of the fetus may, in susceptible women, act analogously to an exogenous poison such as lead, arsenic or alcohol in the nonpregnant individual, by decreasing the capacity for normal vitamin metabolism.

At least two of the well-defined toxemias of pregnancy exert their chief effect upon the liver, namely, acute yellow atrophy and eclampsia, so that it is not unreasonable to suppose that the development of polyneuritis in pregnancy may also be due to hepatic dysfunction, inasmuch as it is well recognized that the liver bears the brunt of the changes in maternal metabolism created by pregnancy.

3. It is advised that the diet throughout pregnancy be routinely reinforced with vitamin-rich substances. This easily applied precaution should be quite as much a part of the systematic prenatal care as the strict attention invariably paid to the teeth, blood pressure, urine, etc.

In most cases this prophylactic regimen should be effective in preventing the development of polyneuritis. Should the pregnancy, however, be complicated by excessive vomiting, the potential menace of polyneuritis becomes increasingly ominous, and it is obvious that under such conditions the persistent administration of a superabundance of vitamins becomes an urgent necessity.

4. For the actual treatment of polyneuritis, the prompt and continued administration of a diet fortified with all the vitamins constitutes the most logical and hopeful form of therapy.

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DISCUSSION

H. DOUGLAS EATON, M. D. (1136 West Sixth Street, Los Angeles).—The suggestion that food deficiencies bear a causal relationship to degenerative diseases of the nervous system has been made with increasing frequency in the last few years. In reviewing the cases belonging in this group that have been seen by the writer during the last ten years, it was noted that practically all of them showed degrees of malnutrition varying from severe to extreme. The majority gave a history of dietary deficiencies, and many had a record of marked gastro-intestinal symptoms with or without pathology. These facts are in keeping, of course, with the food deficiency factor theory.

Whether the food deficiency, or so-called avitaminosis, is the sole cause has not been conclusively proved. The clinical records of many of these cases, as well as some experimental work, indicate the existence of a toxemia possibly of hepatic origin. Which is cart and which is horse is not altogether clear.

Further knowledge on this subject will come from just such excellent case reports and observations as are contained in the article of Doctors Gerstle and Lucia. As our knowledge of the vitamins increases, more light will undoubtedly be shed on this interesting and important question.

The theory suggested seems adequate to explain the genesis of the case under discussion. Absolute proof must await further data. Certainly, the author's suggestions as to prevention will prove of definite value.



KARL L. SCHAUPP, M. D. (490 Post Street, San Francisco).—In discussing this paper there is the temptation to relate in detail the story of the only case of polyneuritis associated with the vomiting of pregnancy that has come to our attention. This would make a paper of equal or greater length, with no added information other than that secured from the pathologist's report after autopsy.

Our patient at the San Francisco Hospital was a Greek woman of thirty-three years. Except for influenza, she had always been well. She had had one child, five years before, and had had a perfectly normal prenatal period. The present pregnancy commenced about August 1, 1932. Nausea began after one month, and continued until admission three weeks later, or September 22.

On admission, nothing abnormal was noted except that the patient was dehydrated, and that she would cause herself to vomit by inserting a finger into her throat and by coughing.

Treatment consisted in the usual measures for mild cases of hyperemesis, and she responded so well that she was dismissed from the hospital in eight days after having been free from nausea for three days. She was eating well, and said that she was "feeling fine." On October 23 she reentered the hospital and complained of vomiting again.

Physical Examination.—Revealed a rather well developed but poorly nourished female, who was disinterested in her surroundings and welfare. Head, neck, lungs, and heart, all negative. Abdominal examination negative, except for a firm uterus lying in the midline about 14 centimeters above symphysis. Pelvic examination showed a hard, small, blue cervix, but was otherwise negative. Remainder of physical examination negative. Blood pressure, 120/80.

Laboratory Tests.—Urine: negative. Blood: hemoglobin, 92 per cent; red blood cells, 4,500,000; white blood cells, 6,050; polymorphonuclears, 76 per cent; lymphocytes, 24 per cent. Wassermann: negative.

Course in Hospital.—During her stay in the hospital the patient's condition became progressively worse. She refused to eat, and when she did, vomiting resulted in practically every instance. Saline and glucose instillations were given, but she soon refused them. Gavage was tried with no success.

About November 25, she started to complain of spots before the eyes, double vision and dimness of vision. The eye-grounds showed several small hemorrhages. Urine gave rather strong acetone reaction, but was otherwise negative. Blood pressure as before, 120/80.

Further Laboratory Procedures

CO₂ combining power, 49.

Urine remained negative, except for acetone.

Blood pressure remained 120/80.

Pulse fluctuated around 110 and temperature remained normal.

Dr. Julian Wolfsohn saw the patient on about December 13, and made the following note:

"No hallucinations; tends to drop into stupor. Shows evidence of pain on manipulation. Spontaneous nystagmus when moving eyes to either side.

"Cranial Nerves.—Small pupils which react to light; several fresh and old hemorrhages in both retinæ; marked rotary lateral nystagmus in both directions; no ptosis.

"Deep Reflexes.—Biceps, triceps and radial, active and equal. Knee and ankle jerk absent; Babinski negative. No evidence of muscle paralysis. Marked tenderness on pressure over posterior tibialis and muscles in general. Skin of legs dry and crusted. Brudzinski and Kernig negative.

"Diagnosis.—In view of positive findings, this is a case of multiple peripheral neuritis; or, better still, neuronitis affecting the brain and peripheral nerves. Most probably due to some toxin associated with the liver or other viscus.

"Advise emptying the uterus."

On December 15, the uterus was emptied by laparotomy, the operation being completed in thirty minutes. At first there seemed to be improvement, but the patient died three days later without any post-operative complications, and continuing in the course of her previous condition.

Autopsy Report.—The following positive findings are quoted from the autopsy report:

"The calvarium, dura, falx, and tentorium are normal. Fluid blood in all venous sinuses. There is a moderate increase in the amount of clear fluid in the subarachnoid space and the basal cisterns. The vessels over the cortex are markedly congested and there are occasional small petechial hemorrhages over the

cortex. The large vessels show no arteriosclerosis. There is a slight shrinking of the gyri with widening of the sulci.

"The right lung is similar to the left. Cut surface exudes a moderate amount of edema. There is an occasional small patch of moist consolidation. Moderate amount of cloudy, frothy fluid in bronchus.

"The left kidney measures 12 x 5 x 3½ centimeters. Capsule strips easily. Surface smooth, pale, and swollen. Cut surface cloudy, with occasional small hemorrhages in pelvis. Ureter normal.

"The liver is small, measures 20 x 14 x 8 centimeters. Surface smooth. Cut surfaces rather markedly congested and brown; no hemorrhages.

"The right kidney measures 12 x 4½ x 3¼ centimeters, and is similar to the left, pale, edematous and cloudy. The pelvis is moderately dilated, and the ureter is dilated to about twice the normal size. There is no obstruction of the right ureter to the passage of a probe."

Microscopic Examination

Kidney.—Slight cloudy swelling of convoluted tubular epithelium, slight amount of coagulated albumen in occasional glomerular capsular space, few hyalin casts. Otherwise, the renal tissue is normal.

Liver.—Slight, cloudy swelling, granular and fatty degeneration and necrosis of the central liver cells; but the liver is practically normal.

Lungs.—1. Patches of air-bearing alveoli, and large collections of alveoli filled with inflammatory exudate, chiefly polymorphonuclears, edema, and a few red cells. Bronchioles filled with purulent exudate.

2. Chiefly normal air-bearing lung with scattered areas of edema.

Brain (Left Cerebral Cortex).—The meningeal vessels are moderately congested, polymorphonuclears prominent among the red cells. Moderate numbers of red cells free in the subarachnoid space in areas. Small hemorrhages are scattered through the cortex, with slight central necrosis.

Left Wall of Third Ventricle.—The white matter beneath the ependyma contains many perivascular hemorrhages of different ages, some composed entirely of intact red cells, others showing tissue necrosis.

White Matter Left Cerebral Hemisphere.—Normal other than rather marked congestion of blood vessels. No hemorrhages.

Sections of the Brain After Hardening.—Show the ventricles normal in size. Many dilated blood vessels throughout the white matter, with small hemorrhages in the gray matter in areas. The walls of the third ventricle and extending out into the white matter for one centimeter are hemorrhagic. The remainder of the brain appears normal grossly.

Bacteriologic Examination.—Smear.

Lung.—Right: Many polymorphonuclears, many Gram-positive diplococci, many intracellular.

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DOCTOR GERSTLE (Closing).*—We are thoroughly in accord with Doctor Eaton when he states that there exists no absolute proof of the pathogenesis of the condition under discussion. However, until such a time as more detailed and accurate knowledge is available, we feel very strongly the advisability of prophylactic vitamin-rich diets.

The extremely interesting case presented by Doctor Schaupp is of particular value due to the detailed necropsy report. It is regrettable that, apparently, it was not feasible to examine the spinal cord and peripheral nerves; but inasmuch as necropsy findings in this condition have been rarely reported, Doctor Schaupp's case is of special value.

* Since this paper has been completed, an excellent article on the same subject, entitled "Gestational Polyneuritis," by Drs. E. D. Plass and W. F. Mengert, has appeared in *The Journal of the American Medical Association* (Dec. 23, 1933, Vol. 101, No. 26).

CARCINOMA OF RECTUM

IN A YOUNG MAN OF SEVENTEEN YEARS

By THEODORE C. LAWSON, M. D.
OaklandDISCUSSION by Dudley Smith, M. D., San Francisco;
William H. Kiger, M. D., Los Angeles.

THE incidence of carcinoma in young subjects in any portion of the body is small in comparison with the large numbers encountered in middle and advanced life. Consequently its proved presence in a young subject at once rouses interest, demands an attitude of constant vigilance, and is considered worthy of comment and reporting.

Carcinoma of the rectum occurs fifth in the list of primary seat of cancers, occurring in 4.3 per cent in female and in 7.5 per cent of total carcinomata in male patients. Henning,¹ in reviewing the pathology, found in one million living children under fifteen years of age twelve cases of carcinoma of the large bowel. Gusserow² analyzed 3,385 cases of cancer in which only two had cancer originating before the patients were twenty years of age. De La Camp,³ in a careful search of the literature previous to 1897, found 9,963 cases of carcinoma and of these, nineteen occurred before the patients were twenty years of age. In a recent statistical study at the Mayo Clinic by L. H. Fowler,⁴ a total of 112 cases with malignant epithelial tumors in young subjects under twenty-six years are reported. Of these, twenty-one had their primary lesion in the large intestine, including the rectum. Of his series, fourteen (12.5 per cent) were in the rectum and sigmoid. Gant⁵ reports a total of ten cases of carcinoma of the rectum in patients under twenty years of age out of a series of 300 cases of carcinoma of the rectum and sigmoid. Phifer⁶ in 1923, in a comprehensive and detailed statistical study of the literature, reported forty-nine cases of cancer of the rectum and sigmoid in individuals under twenty, with an additional case report of his own. Since then several cases of carcinoma of the rectum and sigmoid in patients under twenty years have been reported, the most recent being those reported by Davis,⁷ and Drinkwater.⁸ Fowler states that in the fourteen cases of carcinoma of the rectum and sigmoid only, which he tabulated, the mortality was very high, 85.7 per cent, and not one patient was known to be living more than one year after operation.

ETIOLOGY

The etiology of carcinoma of the rectum would involve the etiology of carcinoma in any portion of the body. This is still a much debated subject and will not be entered into in a discussion here. Localized irritation and repeated trauma are the two most prevalent etiologic factors which, in the majority of instances, are found to be the most constant. The rectum is a site which lends itself to both mechanical irritation from constipation and impacted feces, and to irritation from

infection, as infected and thrombotic hemorrhoids, abrasions of the rectal mucous membrane, fissures, cryptitis, etc. It is because these factors are found more often in adult life, and much more rarely in youth, that the rarity of rectal carcinoma in youth can be chiefly attributed.

SYMPTOMS

The symptoms complained of are varied. In the majority of cases any one or more of the following symptoms may be present: rectal bleeding, constipation, rectal pain, tenesmus, pruritus, diarrhea, mucus, or more remote referred intestinal disturbances, as tympanites or symptoms of reversed peristalsis. The usual fallacy that pain is a concomitant of malignancy should not be countenanced. Usually pain is present only in the terminal stages when the tumor masses are so large as to adhere to the pelvic structures and press on the sacral nerves. The number of instances that one sees where rectal bleeding or rectal discomfort are self-treated or taken care of by charlatans or even by well trained physicians as innocuous hemorrhoids are appalling.

DIAGNOSIS

The establishment of a diagnosis should be approached in an attitude of mind which attempts to prove, by the use of every scientific means at our command, that malignancy does not exist. Digital palpation of the rectum is not sufficient. Every case of rectal pathology, no matter how small and no matter what the age, should have proctoscopic and sigmoidoscopic examination. If the signs and symptoms present cannot be well explained, a barium enema or even an exploratory laparotomy is indicated. Of course, not all cases will permit this added investigation, nor will it be necessary except in cases where the signs and symptoms cannot be explained by more ready means at our command. Too great importance cannot be attached to the significant fact of sudden change in bowel habits of a patient. Where this history is obtained, with or without pain or discomfort, with or without blood, the patient should be advised of the necessity of the thorough investigation needed, including any of the above measures, in order to exclude any possibility of a malignancy.

The diagnoses manifestly have been largely inaccurate in most cases. Of the forty-nine cases tabulated by Phifer, only seven were preoperatively diagnosed as cancer; some were diagnosed as obstruction, some were diagnosed at postmortem, and others had no recorded diagnoses at all. The nearer the lesion is to the anal orifice, so that our means of examination can be more accurately used, the more accurate will the diagnoses be. Wherever possible a biopsy is indicated to establish the diagnosis.

TREATMENT

Treatment must be surgical, with or without radiotherapy. If the disease has progressed so far as to be beyond complete surgical removal of the



Fig. 1.—Gross specimen of rectal carcinoma removed from patient. The growth, covering the entire lower portion of the specimen, shows a clear glistening surface with no ulceration.

growth and metastases, radiotherapy by itself has very little to offer. The dictum that the younger the subject in whom carcinoma is located the more malignant will it be found, can be held generally true. Supportive treatment and proper elimination is, of course, always to be prescribed preoperatively. The operations best suited to each case vary, but usually one of the modifications of the abdominoperineal extirpations is the operation of choice. The consensus of opinion points to the many advantages gained by the preliminary colostomy, in reestablishing proper elimination, putting the primary focus to rest, and lessening infection, irritation, and edema so that its removal may be more easily expedited.

The following is the case history of an adolescent youth of seventeen years.

REPORT OF CASE

G. W., age 17. Entered Highland Hospital with the complaint of mucus in his stools for seven months. Pain in rectum and weakness were present four months.

Present Illness.—Began about seven months before admission with a little blood-tinged mucus in stool after each movement; became somewhat constipated, and had some clear yellow mucus with a few spots of blood with bowel movement. He would then go to stool more often and pass only mucus and blood at times. This condition progressed, and one month ago he noted that he was getting weaker and was losing weight. About this time he began to have pain in region of the rectum. Self-treatment with "pile ointment" produced no relief. There has been no abnormal character to the bowel movements. His weight has dropped from 132 pounds to 101 at present.

Past History.—Negative except for poor appetite and occasional gnawing pain immediately after eating.

Physical Examination.—Eyes, ears, nose and throat, negative; teeth, negative; tonsils, small; heart, negative; pulse, 80. Blood pressure: systolic, 120; diastolic, 80. Lungs, clear. Abdomen, negative except for some bilateral inguinal adenopathy. No masses, tenderness or rigidity. Rectal examination: Just inside the sphincter there is hard, painful, projecting mass felt, extending nearly around the lumen, about one and one-half inches proximal to the anal margin.

Admittance Diagnosis.—Carcinoma; syphilis; tuberculosis.

Course in Hospital.—Temperature, 98.6; pulse, 80; respiration, 22. Hemoglobin, 83 per cent. White blood cells, 9000. Wassermann, negative. Urine, negative.

Roentgen-ray examination: Barium enema showed the bowel canal at rectosigmoidal junction to be greatly narrowed, tortuous, and irregular. The impression was an obstructive new growth in the rectum, possibly involving about three inches of the bowel.

Operation and course: The first stage of combined abdominoperineal resection was done. A permanent colostomy was performed, and distal segment was extraperitonealized.

Pathologic Findings.—The abdominal viscera appeared normal to sight and palpation except for the mid-rectal ampulla where an indurated mass, 3 by 4 centimeters was palpated. It was firm but not appearing to be absolutely adherent to bladder, prostate, or sacrum. No liver metastases present.

After the first stage was completed a biopsy was taken from the rectum. The pathological report was colloid carcinoma.

The patient was somewhat shocked when returned to the ward, but responded well to treatment. After a few days of urinary difficulty, he was quite comfortable. His bowels were moving normally and he was eating well. The second stage of the operation was performed twelve days after the first. The lower rectal segment and anus were removed, a length of eight inches. In the mid-ampulla of the rectum was an area 2 by 3 centimeters in diameter, which was ulcerated, with a somewhat pale, shiny surface superimposed upon an indurated base which surrounded the entire rectum, and extended for a distance of 5 centimeters up the rectum. This operation was followed by mild shock. The next morning the temperature rose rapidly to 104 degrees and the patient showed symptoms of peritonitis. He complained of low abdominal pain and tenderness, but of no digestive disturbances nor epigastric distress. It was thought that the pelvic peritoneal diaphragm had been broken through. He was given fluids and sedatives with considerable relief. On the second day postoperative the white cell count was 46,100. He then began to vomit dark, fecal-appearing fluid that did not have a fecal odor, and began to fail rapidly, but obtained temporary relief from a transfusion. The afternoon of the fifth day after the second stage, he became irrational, had low blood pressure, a fast pulse, high temperature, and generally poor condition. During the night he became unconscious and expired without regaining consciousness. Autopsy was done the following day.

Autopsy Findings.—Ribs and costal cartilages, negative; lungs and pleural cavities, normal; no free fluid and no adhesions were found.

Heart: The heart was small; the muscles pale and taut; there was no increase of pericardial fluid and the valves appeared normal.

Abdomen: On opening the abdominal cavity, there was found a localized peritonitis in the upper right quadrant. The stomach was empty and there was a large collection of fluid behind the stomach to the lesser sac. On opening the gastrocolic omentum, the fluid was found to be a dark brownish color, and about three liters in amount. The stomach was removed. There were several ragged ulcers in the lower part of the stomach and in the first part of the duodenum. There was an entire loss of mucous membrane over



Fig. 2.—Microphotograph of specimen of rectal cancer of the patient. Normal rectal tissue is shown with carcinomatous infiltration in lower left portion, and colloid carcinomatous tissue on the right. The typical signet ring cells are easily discernible in the colloid carcinoma.

the ulcerated area in the stomach, with exposure of the muscularis mucosa and perforation in one area. The veins were thrombosed in this region. There was no attempt at healing of the ulcer. Numerous fresh blood-clots were present; some of these were adherent to the underlying pancreas. The pancreas itself was not ulcerated.

Liver: The liver was large and tense; localized peritonitis was present over the right dome of the liver; on cut section it was a pale yellowish color, fibrotic and edematous, and raised above the surrounding surface.

Gall-bladder: Negative. The colostomy opening on the left descending colon was functioning well. There were no omental adhesions present and no evidence of inflammatory reaction in the adjacent intestines or peritoneum.

Bladder: Dilated. The pelvis was well walled off from the drains which were present in the rectal fossa.

Kidneys: The left kidney was normal in size. The capsule stripped easily. There were a few small areas of hemorrhage in the cortex. The right kidney was removed with difficulty and the capsule was greatly thickened. There was an acute inflammatory process with formation of some pus pockets.

COMMENT

The colloid cancer reported is due to a degeneration of epithelial cells of a glandular character, and is usually associated with columnar, scirrhous, medullary cancer and epitheliomata, and should be so regarded, instead of as a separate type. The cause of death was perforated gastric ulcer due to thrombosis of the left gastric vein with peritonitis localized to the right upper abdominal cavity. The interesting feature concerning this

was that all his postoperative complaints were of his lower abdomen and not where the pathology was found. Although he complained of occasional gnawing pain immediately after eating, yet there was nothing, either by sign or symptom, that pointed to a preëxisting preoperative ulcer. It was no doubt due to the postoperative thrombosis in the left gastric vessels, localized necrosis, ulceration through the walls, and subsequent perforation. The incidence and causative factors of so-called trophic ulcers of the stomach are so little known, if indeed they even exist, that they may be mentioned only to be dismissed.

The presence of the right perinephric abscess is incidental, and was so small as not to be a serious factor in the demise of the patient.

SUMMARY

The case of a carcinoma of the rectum in a young man of seventeen years is presented who was treated by a two-stage abdominoperineal extirpation, and who died because of a peritonitis due to the perforation of a gastric ulcer caused by the thrombosis of the left gastric vessels. As far as can be definitely ascertained, this is the fifty-seventh case of cancer of the rectum and sigmoid to be reported in the literature in individuals under twenty years of age. There are, no doubt, many cases occurring in young patients that have not been reported, which makes it imperative that careful attention be given to this condition, and every means be carried out, to be followed by postoperative radiotherapy.

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DISCUSSION

DUDLEY SMITH, M. D. (909 Hyde Street, San Francisco).—As Doctor Lawson has pointed out, carcinoma of the rectum is a very rare condition in patients under twenty years of age, but the fact that it does occur makes it important that cases should be called to the attention of the profession. The unusual complication which caused this boy's death is extremely interesting.

I trust that Doctor Lawson in closing the discussion will give the family history in this case, if available. I suspect that these cases of cancer in the

young occur more frequently in cancer families than otherwise.

In August of 1926 I operated for cancer of the rectum in a boy nineteen years of age, which I have never reported. Unfortunately the growth had penetrated the anterior rectal wall and involved the posterior bladder wall. I therefore did only a colostomy and used radiotherapy. He lived until January, 1929, and had two years of very comfortable life following the colostomy.

The family history in this case was very interesting. His father died at forty-four with adenocarcinoma of the pylorus; his mother's sister died twenty-five years after removal of her breast for cancer; his mother's brother died at thirty-six from adenocarcinoma of the transverse colon; two maternal aunts had cancer of the breast; and a first cousin, a young woman of twenty-two, survived the removal of the cecum and a part of the transverse colon for scirrhus adenocarcinoma in 1922, and is still living and perfectly well. Thus the immediate family history of my patient who developed carcinoma of the rectum at nineteen years of age included six cases of cancer, one of which developed before age twenty-two and another before age thirty-six.

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WILLIAM H. KIGER, M. D. (1930 Wilshire Boulevard, Los Angeles).—The incidence of cancer in young adults is so rare that it is difficult to come to any very definite conclusion. In my own practice I have had only three cases of cancer in patients around twenty. One was far advanced, and died in a short time after I first saw her. The other two, both females, gave a history of having rectal polypi, which prolapsed at every stool for a number of years. Degenerative changes took place in these growths and when they were removed they were diagnosed as carcinoma. In one of these patients it was a case of multiple polypi. We operated first, August 14, 1928, using the cautery, and removed the polyp, which was just inside the sphincter. In 1932 she had malignant degeneration of other polypi higher up in the rectum, but not at the seat of the original one. In the other case, a girl of twenty, the growth was just inside the sphincter, on the anterior wall. This polyp had prolapsed at every stool for several years. This was removed with cautery on January 5, 1927, and was carcinomatous. To date there has been no recurrence and the patient has since had two full-term pregnancies. It is my belief that Doctor Lawson's patient had a polyp which was unrecognized, and the constant irritation of the passing of fecal matter over it produced malignant degeneration.

I have seen a number of cases in older persons where we are certain that the malignancy was due to degenerative changes in rectal polypi. In adult life the most frequent cause of rectal bleeding is hemorrhoids, but in young adults this seldom happens, and polypi are the most common cause. Whenever a patient of this age gives a history of blood in the stool, ascertain as soon as possible the cause of the bleeding.

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DOCTOR LAWSON (Closing).—In answering Dr. Dudley Smith as to the family history, I wish to state that there is absolutely no carcinoma in the family, going back two generations on both the maternal and paternal side, so it is felt that this case is not one in a cancer family.

It is possible, as Doctor Kiger has mentioned, that the initial rectal lesion was a rectal polyp which was not recognized because the patient did not seek medical advice until rather late and was treating himself for hemorrhoids and found that he was not getting anywhere with it.

One cannot emphasize too often the need of having a thorough manual, proctoscopic and roentgenologic examination in all cases of rectal and lower bowel pathology (no matter what the patient's age) where it is felt that these diagnostic means are indicated.

FACIAL NERVE DAMAGE—ITS REPAIR*

By HARRINGTON B. GRAHAM, M. D.
San Francisco

DISCUSSION by Robert C. Martin, M. D., San Francisco; Sterling Bunnell, M. D., San Francisco; H. O. Barnes, M. D., Los Angeles.

IT was in 1903 that discussion seems to have started concerning the possibilities of repairing the damaged seventh nerve; discussions which had been stimulated by the work of Faure, Korte, Kennedy, Ballance, Cushing, and others, in their anastomoses of the nerve with the spinal accessory and hypoglossal.

Between 1903 and 1908 all attempts, apparently, were in anastomoses of the distal end of the seventh with these nerves. The anastomoses led to many successes, but the inconveniences accompanying the repair were so many that men agreed that a direct repair of the nerve at the site of the damage was more advisable.

COMMENT ON THE LITERATURE

Professor Alt¹ in 1908 read an excellent article in which he called attention to the fact that many patients with paralysis recovered without further interference, the processes of repair being spread over a period of from six weeks to two years, and that if the nerve was so prone to recover its function after damage, it would at least be well to make an attempt to find the damaged portion and do whatever was necessary to restore function. Alt in one case freed a nerve of granulations and scar tissue, and got complete recovery inside of a few weeks; and he called attention to the fact that Stacke² had in 1903 done the same thing in a case where function was restored within two years. His recommendations are very clear and interesting, namely, to uncover the nerve, remove all blood-clots, depressed bone, scar tissue and granulations, and protect the nerve with gutta-percha for a few days.

In 1909, F. Marsh³ related that in 1900 he had operated on a patient whose facial nerve had been injured near the horizontal canal; a fortnight later the wound was opened, the frayed ends of the nerve teased into place, and two or three strands of fine chromic gut placed round the nerve, the ends being inserted well into the canal and the whole protected by gutta-percha tissue. Again, in 1908, a nerve was injured while cleaning off a cholesteatomatous mass; it was treated in the same way, and both cases showed signs of recovery inside of six weeks.

F. Sydenham,⁴ in 1908, reopened an operated case two weeks after the severance of the nerve, and found a gap of one-third to one-half inch. He placed a strand of silkworm gut in the gap, inserting the ends well into the fallopian canal; and in four months' time there was normal expression in the face.

The recovery of function in these recently operated ones is not so surprising as in that of Pro-

* Read before the western section of the American Laryngological, Rhinological and Otological Society, San Francisco, January 13, 1933.

fessor Passow's⁵ case, reported also in 1908, in which he reopened a radically operated ear ten years after the paralysis, uncovered the nerve and in from three to four weeks got reaction which later became a full recovery. This was more than duplicated by Kennedy, who reported in 1911 a case of partial recovery after an interval of fifteen years. The nerve in this case was lifted out of the canal and freed of granulations and cicatrices.

In none of these cases had any attempt been made to suture the divided ends of the nerve and hold them securely in apposition. It was not until 1927 that Sterling Bunnell⁶ published his case of suture of the divided nerve within the temporal bone. He uncovered the nerve in its whole extent from the parotid gland to the horizontal canal, transferring it to a new bed on account of the amount of lost tissue. He gained about eight millimeters and was able thus to approximate the ends after removing neuromata which had formed in the scar. Bunnell calls attention to the difficulty encountered in working in such an awkward place, and advises, first, practice on animal nerves obtained from the butcher; secondly, the use of very tiny, curved needles with finest silk thread which is passed through the sheath of the nerve in four places.

REPORT OF CASE

In 1926 I saw a case of facial paralysis that had been operated through the external ear, an attempt apparently having been made to remove the lateral attic wall and enlarge the antrum by means of a curette and chisel, eight months previously. There was a total paralysis of the right side of the face. I did a radical operation, uncovering the facial in its whole extent and freeing the nerve from its canal. The fibers of the proximal portion of the nerve were macerated, no distinct trouble being located at the promontory wall. What shreds could be located were teased into position and laid as closely to the canal at the promontory as was possible, the whole being held in position as securely as possible by a gauze pack. This was facilitated by the nerve having been freed from the canal, thus gaining a slight mobility. The gauze pack remained for five days, when it was carefully removed and the usual after-care instituted. In two months the patient left San Francisco without any appreciable change in the facial muscles, but returned in eight months with a broad smile and nearly perfect function.

In the same year another nerve was uncovered after a paralysis of two years' standing, but no discontinuity was found. Within three months, however, there was perfect motion in the face, the assumption being that there probably had been a compromising of the bony canal, which had not been discovered at operation.

OTHER REPORTS

In 1928, R. C. Martin⁷ sutured, with silk, a nerve that had lost two millimeters of its substance; obtaining the necessary mobility of the distal trunk by freeing the nerve from the stylo-mastoid foramen and giving it a new and shorter course.

In 1931, Duel⁸ transplanted a 27-millimeter graft of Bell's nerve from the axilla into the space between the severed ends of the facial nerve in an eight-months-old child. The distal end of the graft was sutured with silk, No. 000,000, to the divided stump of the facial nerve in the parotid gland. The proximal end of the graft rested

against the divided end of the facial nerve in the canal at the bend without suture. Platinum foil covered the graft for two weeks. Sixty-one days later the facial palsy began to disappear and in 101 days the motion was nearly perfect.

Bunnell, in a recent personal communication, related a graft case done in 1930 in which a tumor of the ascending portion of the facial was removed and two and one-half inches of the sural nerve transferred to the facial. In this case the various branches of the facial were dissected out of the parotid gland and combined into three bundles. These three bundles were then sutured to three portions of the sural, and the proximal ends of the sural were combined into one stem, which was in turn sutured to the facial. In the course of one year there were twitchings in the face, and symmetry returned; but due to a regrowth of tumor from the parotid, function was again lost.

All of this clinical work has been most beautifully coördinated through the recent experimental work on animals of Ballance and Duel,⁸ and their conclusions are well in accord with the clinical development of the subject to date.

IMPORTANCE IN GENERAL PRACTICE

In the light of such success as has been obtained in these few published cases, one wonders why more reports have not appeared in the literature; for certainly the specialist is not allowing these unfortunate cases to go without an attempt being made to correct the damage. Possibly the attention of the general medical profession has not been properly focused on this subject, so that the physician in general practice is not cognizant of the possibilities in the matter and does not make the effort to bring the patient into the hands of the surgeon.

ORIGIN OF THE PARALYSIS

The origin of all these paralyses should be studied in detail and the location of the pathologic lesion determined as closely as possible before the type of operation is determined upon. It would appear that the length of time that the paralysis had existed had little to do with the success of the operation; for if a case can be successfully operated fifteen years after a severance, it is probable that a still longer period could intervene.

Ballance insists that the faradic reaction should be present in the muscle; but I see no objection under our present knowledge of the subject to making any attempt in spite of an absent reaction.

The causes of the paralysis are: accidental injuries, new growths, bacterial invasions of the temporal bone, and nonsuppurative inflammations of the nerve. Those cases that are brought most forcibly to the attention of the otologist are the accidental injuries, and these are the ones that probably will give the best results by immediate interference. In gunshot wounds or in operative cases, when a portion of the nerve has been carried away, the nerve graft from Bells, the sural or radical probably holds out the best chance for recovery, but there is a large proportion of the

operative injury cases where only a depression of the bone exists, or where a hemorrhage into the canal or sheath of the nerve has occurred; here a decompression of the nerve is sufficient or, as in one of my cases, the ends may be approximated with a fair chance of recovery. The ingenious methods of Marsh and Sydenham give one courage to attempt anything in order to stimulate the jumping of nerve tissue over the gap.

Ney⁹ has pointed out that in some injury cases there is simply a stretching of the nerve or a shock; this, I have reason to believe, may have been the cause of the paralysis in one of my cases, as one year after an accident severe enough to produce a nonreactive labyrinth without demonstrable fracture through the temporal bone, there has been a gradual recovery of function in the lower facial muscles.

Ney also, in 1922, suggested and developed on the cadaver complete procedures to be followed in the opening of the canal and nerve sheath in cases of interruptions and compression. Whether the elaborate details described are an essential or not remains to be seen, but the sound development of the subject and the conclusions arrived at are a pleasure to read.

IN CONCLUSION

In conclusion, there is no doubt but that Ballance and Duel, through their fine research work on animals, have laid a firm foundation for future clinical advance, and the surgery of the repair of the facial has passed far beyond the experimental stage. It remains to accumulate clinical data on the exact pathologic lesions involved, and it is to be hoped that every opportunity will be taken to describe in detail the finding in each individual case.

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DISCUSSION

ROBERT C. MARTIN, M. D. (384 Post Street, San Francisco).—Doctor Graham has given us a comprehensive review of the literature on this subject. It is interesting to note the length of time after injury that successful repairs are said to have been done. Though no harm is apt to result from a skillful attempt at repair by nerve graft or direct suture, we believe that

a very poor prognosis must be given in cases where there is no faradic response in the muscle. Ballance also puts forth this opinion.

We are again amazed at the rapid return of function reported by some authors (Sydenham, Marsh, Passow). It has been our experience that several months must elapse before the muscle tone recovers, and from eight to twelve months before emotional control returns.

It should be emphasized that serous labyrinthitis is apt to occur from working very close to the horizontal canal. This occurred in both of the cases we operated, and in one of Doctor Sewall's. It is not an operation to be undertaken lightly.

Finally, it must be borne in mind that many patients with facial nerve injury recover if not operated, and in our opinion no harm is done if one waits until a clean wound is obtained before attempting repair. In many cases improvement will be so marked that further surgery is not indicated. In the event that the nerve has been severed, immediate repair may be tried, but many contusions recover.

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STERLING BUNNELL, M. D. (Physicians Building, San Francisco).—Emotional facial expression can be regained only by restoring the continuity of the facial nerve to its cerebral center. An attempt to repair the nerve intratemporally is, therefore, worth the effort. From an experience of about nine hundred nerve repairs, five hundred of which were in the hand and fingers, I believe that the following may be stated.

After careful nerve suture, a 100 per cent perfection is rarely obtained, the usual result being 80 per cent. The degree of regeneration is in direct proportion to the accuracy of the union. Therefore, only the poorest result can be expected after "bridging with chromic catgut or silkworm gut," and repair of a nerve in granulation tissue, in presence of the usual infection of an open wound, will not give a good union. We should delay our repair in the middle ear until after all is clean and healed, or only mediocre results will be obtained. Also it is necessary, for the best result, to cover over the nerve suture with a live plastic flap, instead of tinfoil or rubber. If it is possible to fasten the ends together, no nerve is too tiny to regenerate. I have successfully sutured the branches of the facial distal to the parotid gland. Free nerve grafts are successful, as has been proved to me in my present series of twenty-five cases. A sensory-nerve graft will convey motor fibers; therefore, I use the sural nerve in preference to making paralysis by excising a motor nerve. My experience in intratemporal repair of the facial nerve is limited to three cases. In the first, on January 3, 1925, the suturing was at the genu, and in the second, on August 2, 1928, the suturing was done at the geniculate ganglion. In my third case, on December 29, 1930, of which Doctor Graham speaks, the three-branched graft from the sural nerve reached from the level of the floor of the middle ear into the substance of the parotid gland. Regeneration commenced in eight months, and in seventeen months symmetry of the face was restored and there was some active motion in all of the distribution of the nerve from the eye to the chin. The tumor then recurred, and on October 11, 1932, was removed. Good nerve fibers were, by microphotographs, demonstrated in the grafts even to their distal ends at the parotid. Doctor Graham's paper is a valuable résumé of the present change in trend toward direct repair of the facial nerve instead of by anastomoses. Failing in this I believe, based on results obtained, that the method of choice is temporal and masseter muscle nerve transference.

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H. O. BAMES, M. D. (512 Pacific National Building, Los Angeles).—The author does not attempt to correct the results following facial nerve damage, except by repair of the injury to the nerve directly; yet the excellent results obtained in his own cases, as well as those of the literature which he cites, should serve as

a stimulus to always try such direct repair, even after the lapse of years.

The very paucity of the literature reporting such fortunate outcomes, however, in comparison with the large number of facial palsies existing unrepaired, would seem to indicate that such results are perhaps exceptional. Considering, therefore, the avenues of relief available, when direct approach fails we find at our disposal three distinct methods:

First: Grafting to the distal end of the facial nerve a portion of the proximal end of the hypoglossal or spinal accessory nerve, severed at a point which gives sufficient length for good contact; with results so far, in most cases reported, that are sufficiently unencouraging to justify the attitude of all those who have tried the method, *i. e.*, it is not worth while.

Second: Implantation of segmental portions of the masseter into the orbicularis oris, and segmental portions of the temporal muscle into the orbicularis palpebrarum. Results: This, if surgically successful, gives enough muscular response to justify the intervention, but does not do much toward improving the appearance of the saggy face in repose.

Third: To repair the distorted, relaxed facial tissue, it is necessary to resect a portion of its redundancy and affix the thus restored contour permanently by shortening its fascial attachment. The real fixative agent is the adhesions caused by the intervention, hence neither silver wire nor strips of fascia lata have any advantage over other non-absorbable suture material. Functional restoration by this method is limited to the minimization of the possibly existing drooling or weeping; this alone would justify the procedure, but if, in addition, the realignment is well planned, the disfigurement of a palsied face can be greatly lessened.

NEUROSYPHILIS—ITS TREATMENT WITH HYPERPYREXIA PRODUCED BY DIATHERMY*

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NORMAN N. EPSTEIN, M. D.

AND

S. BARRE PAUL, M. D.
San Francisco

DISCUSSION by H. J. Templeton, M. D., Oakland; Helen Hopkins, M. D., Los Angeles; Richard W. Harvey, M. D., San Francisco.

THE beneficial effect of malaria upon the clinical course of dementia paralytica, first used by Wagner von Juaregg¹ in 1918, stimulated a search for a more controllable means of producing fever. Other infectious agents have been used for this purpose, namely, the organism of rat-bite fever and relapsing fever. Serious objections have been raised against this method, as occasionally the artificially produced disease is difficult to control, frequently the amount of fever obtained is inadequate, and many individuals have a natural immunity toward the disease, which prevents a successful inoculation.

The injection of foreign proteins, such as milk and vaccines, has been employed in producing fever, but these materials occasionally cause anaphylactic reactions, and often fail to produce the desired height of temperature. Injections of sulphur in oil have also been used. The use of hot baths is not an efficient method, as the tempera-

ture cannot be sustained long enough for the greatest therapeutic effect, and such baths are frequently depressing to the patient. Radiant heat may be a practical method, but depends upon the heating of the environment first, and then the transmission of the heat from the body surface by the blood to the inner organs of the body. Hot air and other sources of heat have been used to elevate temperatures of the body. We have used a method of this type for the past few weeks quite successfully. This will be described in a future report.

At present the use of diathermy or radiothermy has proved an effective means of producing hyperpyrexia. These two methods are quite similar in that electrical energy is used in each to produce the elevation of temperature. In each a high frequency electric current is employed. With diathermy the current is passed between two large electrodes in contact with the patient's body and the heat is generated by the resistance offered to the current by the body. This heat is carried off by the blood stream to other parts of the body, and a general rise in temperature occurs. In the method where radiothermy is used, the patient is placed in a field of short radio waves, and the heat is generated by electric currents set up within the body. This was recently described by Carpenter and Page.² We have used diathermy for this purpose during the past two and one-half years. In a previous communication our earlier experiences were reported. In this paper we wish to report the clinical results obtained with the continued use of the method.

PHYSIOLOGIC EFFECTS

A great deal of investigation has been made upon the physiologic effects of artificial fever produced by means of diathermy or radiothermy. The reports of Boak, Carpenter and Warren,^{3,4,5} Bishoff, Ullmann, Hill and Long,⁶ Bishoff, Maxwell and Hall,⁷ Bierman,⁸ Feinberg, Osborne and Steinberg,⁹ Neyman and Osborne,¹⁰ and others, have contributed much to our knowledge of these changes.

There is an increase in the metabolic rate two and five-tenths times for each ten degrees rise in temperature; the white blood corpuscles increase in number and phagocytic activity; the percentage of polymorphonuclear cells is increased, and the lymphocytes decreased. Through the loss of fluids a concentration of the blood and a lowering of the blood volume occur.

There is a tendency for the nonprotein nitrogen, uric acid, the chlorids, and the calcium to increase. The CO₂ content of the blood decreases. There is some disagreement between different observers concerning these chemical changes. Carpenter and Warren¹¹ state that there is a marked decrease in the blood sugar, while Bierman⁸ found an increase in the blood sugar. During the treatment there is a marked loss of fluids, the patient losing four or five pounds of weight, which is usually recovered within twenty-four hours. The blood pressure, both systolic and diastolic, usually falls, and may be an excellent indicator of the patient's condition. The greatest fall in blood pressure

* From the departments of neurology and dermatology of the Mt. Zion Hospital, San Francisco.

* Read before the General Medicine Section of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

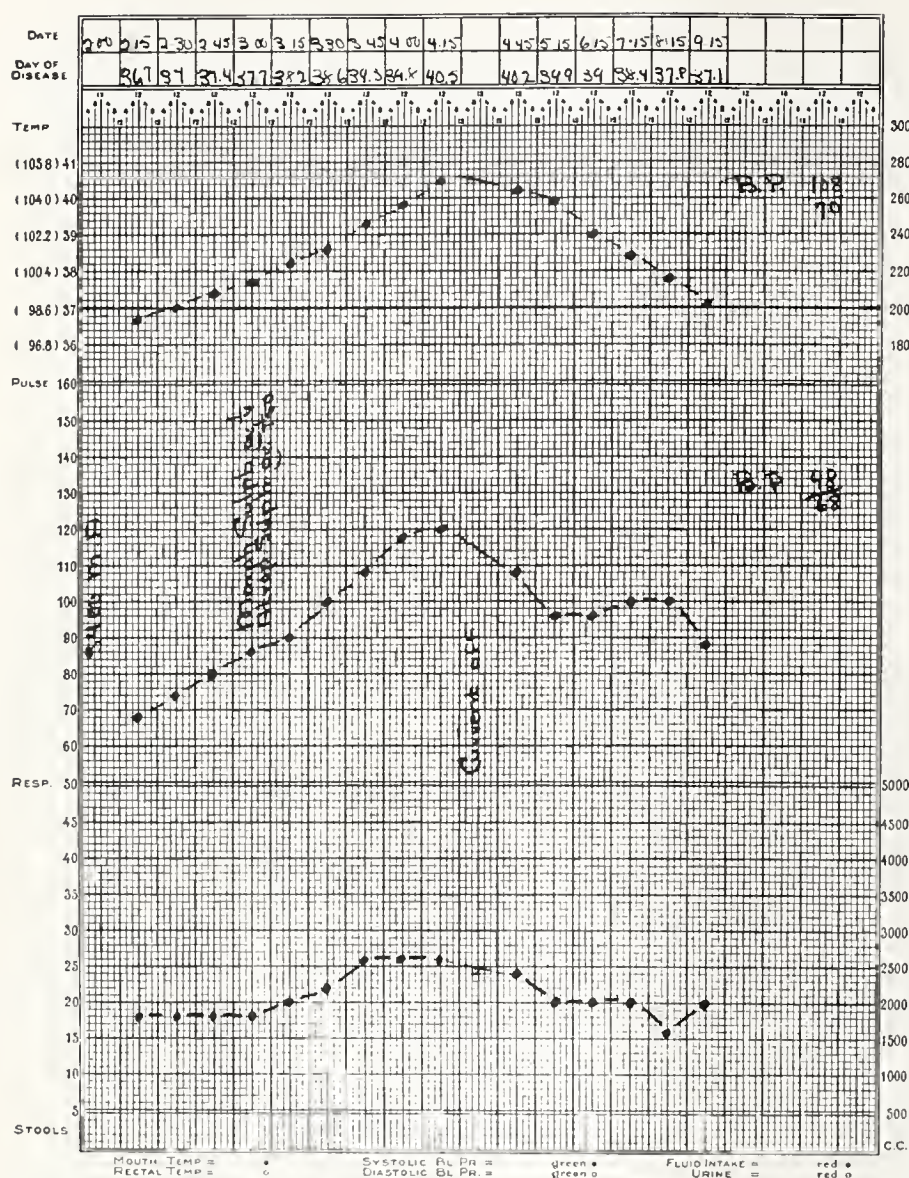


Fig. 1.—Temperature chart showing usual type of fever produced by diathermy.

which we noted was 90 systolic and 50 diastolic, the patient having 185/90 before the treatment and 90/40 afterward.

The effect of fever upon the *Treponema pallidum* is of particular interest. Warren and his co-workers found that the *Treponema pallidum* was killed *in vitro* by a fever of 39 degrees centigrade (102.2 degrees Fahrenheit) for five hours, by 40 degrees centigrade (104 degrees Fahrenheit) in three hours, by 41 degrees centigrade (105.8 degrees Fahrenheit) in two hours, and by 41.5 degrees centigrade (106.3 degrees Fahrenheit) in one hour. These temperatures have also been effective in preventing the development of syphilis in experimental animals, and in causing the healing of syphilitic lesions in rabbits. This observation would indicate that therapeutic fever should be effective in the treatment of human syphilis.

CLINICAL STUDIES

In June, 1930, Neyman and Osborne¹⁰ reported the results obtained by them in a series of twenty-five cases of dementia paralytica treated with hyperpyrexia produced by diathermy. Sixty-six per cent developed complete remissions, 8 per cent were improved, and 26 per cent were unimproved. In later reports Neyman and his coworkers added

to their original series with the same general findings. King,¹² King and Cocke,¹³ Schmidt and Weiss,¹⁴ Wilgus and Lurie,¹⁵ Hinsie and Carpenter,¹⁶ Wagner von Juaregg,¹ Bierman,⁸ Carpenter and Warren¹¹ also reported favorably upon the use of this method in the treatment of dementia paralytica. Potter¹⁷ obtained good results in a group of Wassermann-fast cases and a number of patients with various forms of syphilis of the central nervous system, through combining chemotherapy with fever produced by diathermy.

TECHNIQUE

The technique used by us has been described in detail in a previous report,¹⁸ and is the same as used by Neyman and Osborne,¹⁰ with some modifications, briefly: The patient is insulated from the bed by rubber sheeting and large fenestrated electrodes fitted snugly to his body. Warm blankets are placed under and over the patient to prevent loss of heat, and then he is encased in a sleeping bag made of rubber sheeting. Using a superdiathermy apparatus, a high frequency electric current is passed through the patient's body, starting it at 1500 milliamperes and gradually increasing up to 4500 milliamperes. When the temperature reaches 37.8 centigrade (100 degrees

Fahrenheit) a hypodermic injection of one-quarter grain of morphin sulphate and 1/150 grain of atropin sulphate is given to allay restlessness and decrease perspiration. Warm fluids containing sugar and lemon to taste, are given throughout the period of fever. The current is shut off when the desired temperature is reached. During the first treatment, the temperature is not permitted to exceed 39.4 degrees centigrade (103 degrees Fahrenheit), while for succeeding treatments the temperature is kept at between 39 degrees centigrade (102.2 Fahrenheit) and 40.5 degrees centigrade (104.9 degrees Fahrenheit) for six hours. The patient is carefully watched for a secondary rise of temperature after the current is discontinued. In the event of cardiovascular failure, extreme exhaustion or a rapid rise in the temperature, the blankets are removed, an alcohol sponge, cold fluids by mouth and, if necessary, cold colonic flushes are given.

CLINICAL MATERIAL

During the past two and one-half years fifty-four patients with syphilis have been treated by us with this method. Of this number, thirty-nine are included in this report. The others are excluded because of having had too few treatments

or because of a lack of proper follow-up. A total of 750 treatments have been given, including patients with diseases other than syphilis.

Tabes Dorsalis.—Twenty patients with tabes dorsalis were treated. Of these, three were reported as clinically improved by their private physicians, and are not listed in Table 1; seventeen others have been under close observation, and from a clinical standpoint nine were markedly improved, with relief of gastric crises, rectal crises and lightning pains. Three patients improved in general health with an increase in weight and strength. One was asymptomatic. Three were unimproved. One patient has not reported recently. Optic atrophy in two patients was unaffected by the treatment. Striking relief of pains was the outstanding result in this group.

Paresis.—Nine patients with paresis were treated, of whom seven are listed in Table 2. Of the total number, two showed definite improvement, three made slight clinical improvement, one went downhill rapidly and was sent to the State Hospital, one was unimproved, and two died. The results in this group, on the whole, were disappointing.

Asymptomatic Central Nervous System Syphilis. Six patients comprise this group, and all were improved in general health; four of these were improved, as far as their serology was concerned.

Meningovascular Syphilis.—Two patients were in this group. One made a marked clinical and serological improvement; the other was asymptomatic,

but after four treatments the cell count in the spinal fluid decreased from 168 to 8.

Tabo Paresis.—Two patients with this diagnosis were clinically improved. One made a serologic improvement as well.

SEROLOGIC CHANGES

In general, the serologic changes did not parallel the clinical improvement noted.

Blood Wassermann.—Three cases changed from positive to negative; three became less positive, and three changed from negative to positive. The others were unchanged.

Spinal Fluid.—The Wassermann changed from positive to negative in eight cases; the colloidal gold curve became normal in five cases; in six patients the colloidal gold curve changed from a mid-zone type to a first-zone type, while in four others the opposite occurred. The globulin became normal in six cases. In fourteen cases there was a definite decrease in the cell count.

Table 6 shows the spinal fluid changes in Case 56, following each of the patient's treatments.

UNTOWARD EFFECTS

As a general rule the treatment was well tolerated by the patient, being accompanied by none of the exhaustion and debility seen with malaria therapy. Neither jaundice nor severe anemia were seen in our series. The patients were all ambulatory: they received their treatment, and were ready to leave the hospital in twenty-four hours.

This form of therapy, however, has very definite dangers, and is contraindicated in patients who are greatly debilitated; in those with severe cardiovascular and renal lesions; in alcoholics; in patients with obesity; and in those with hypertension. Any patient who would not be considered a good surgical risk for a major operation would also be a poor risk for pyrotherapy. Occasionally, one feels justified in treating patients who are not good candidates for the treatment.

Two patients expired as a result of the procedure. The first death occurred in a markedly deteriorated paretic sixty-seven years of age, with hypertension. He was obviously a poor physical risk, but as he was going downhill rapidly, hyperpyrexia was given. He developed a secondary rise in temperature of 42 degrees centigrade (107.2 degrees Fahrenheit) three hours after the current was shut off, and went into collapse. His diastolic blood pressure fell to zero. No autopsy was performed.

The second fatality occurred in a paretic twenty-six years of age, who gave a history of transient

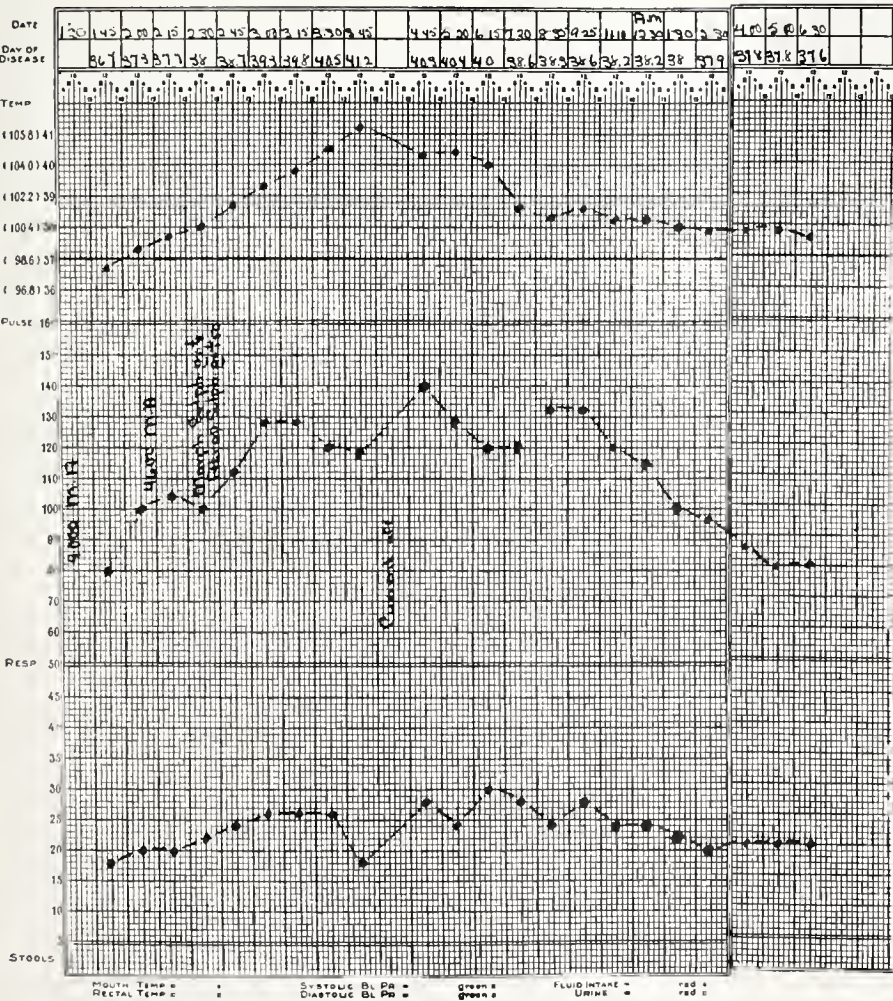


Fig. 2.—Temperature chart, diathermy method.

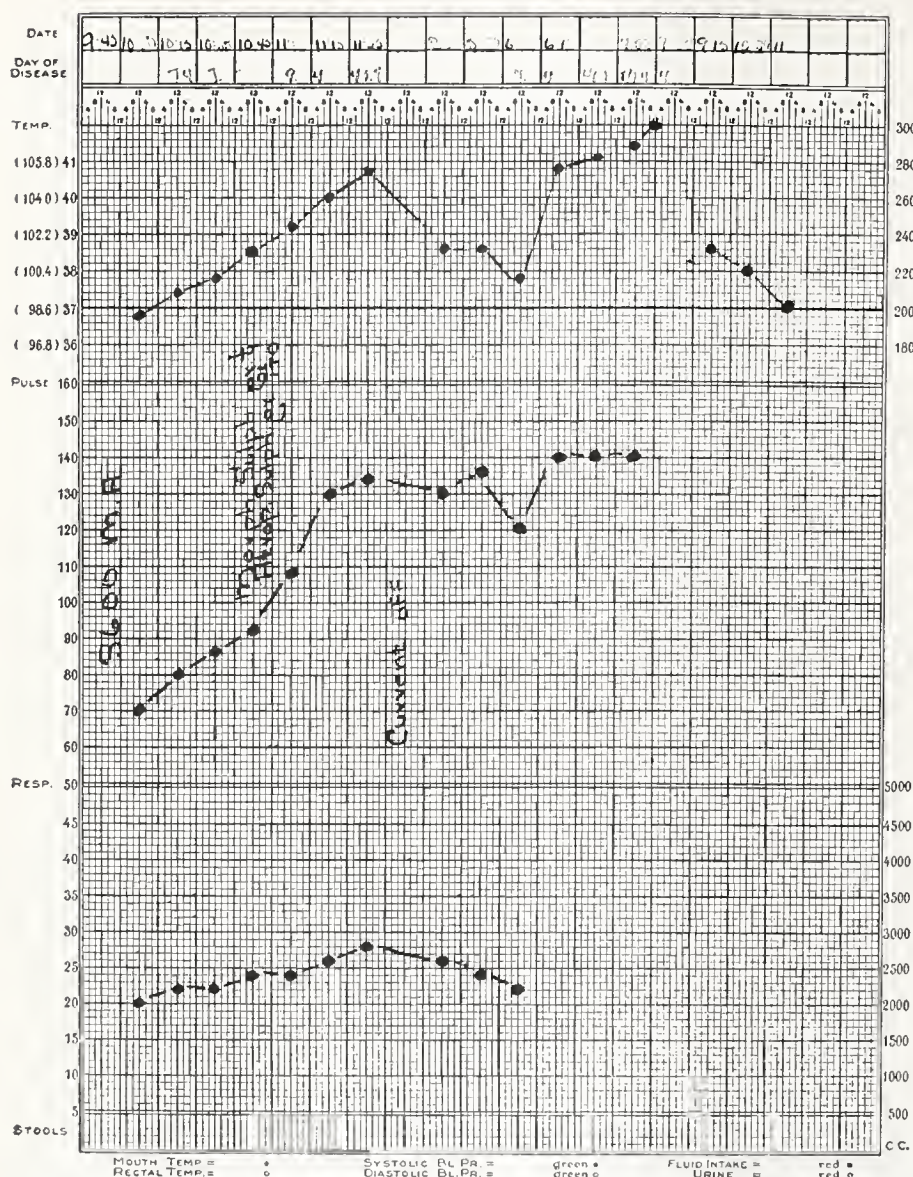


Fig. 3.—Temperature chart, diathermy method, showing secondary rise after the current was shut off.

attacks of hemiplegia with convulsions and was almost moribund at the time. Shortly before entry he had another attack of hemiplegia. He received his first pyrotherapy treatment on November 10, 1932, which was uneventful except that a secondary rise of temperature occurred thirteen hours after the current was shut off. The second treatment was given one week later, and again a secondary rise in temperature occurred up to 42 degrees centigrade (107.2 degrees Fahrenheit) (rectal). The temperature was gradually reduced, so that the following morning it was 39.2 degrees centigrade (102.5 degrees Fahrenheit) (rectal); but the patient developed numerous convulsions and became comatose. Four days after entry the patient expired, his temperature being 38.4 degrees centigrade (101 degrees Fahrenheit) (rectal) at exitus. Autopsy showed a bilateral bronchopneumonia, passive congestion of the viscera, and a chronic diffuse meningo-encephalitis. Like the first case, this patient was not a good candidate for this treatment.

Other untoward effects have been noted. A secondary rise in temperature after the current is discontinued should be regarded as a danger signal. This rise may occur within a few moments after the treatment is discontinued, or several

hours later. It may reach alarming heights, and may be combated by means of cold liquids by mouth, removal of the blankets, an alcohol sponge, and cold colonic flushes, if necessary.

Superficial and severe burns are occasionally encountered, and are usually the result of a poorly applied electrode. During the past year only one patient received a burn severe enough to necessitate the discontinuance of the treatment.

Harpes simplex is occasionally observed. Several patients vomited for a few hours after the fever. Mild delirium occurs during the fever, but is of little significance.

COMMENT

Continued experience with the method of producing artificial fever, described in this communication, emphasizes the fact that temperatures of therapeutic value in the treatment of syphilis can be obtained safely. Care, however, must be exercised in the selection of patients for the treatment, and a certain skill must be attained in the carrying out of the technique. Inasmuch as the *Treponema pallidum* is killed *in vitro* by a temperature of 39 degrees centigrade (102.2 degrees Fahrenheit) for five hours, fevers of this degree should be of great value in the treatment of syphilis.

The majority of our patients had tabes dorsalis, and suffered with gastric and rectal crises and lancinating pains. We were unable to treat badly demented paretics, as our work was done in a general hospital where the proper facilities for controlling such patients were not available.

The diathermy method of producing hyperpyrexia can be used on ambulatory patients who remain in the hospital twenty-four hours. This permits the patient to carry on his usual occupation, and thus does not interfere greatly with his economic status.

SUMMARY*

The clinical results observed in a series of thirty-nine patients with various types of neurosyphilis are reported.

Marked relief of the lightning pains and crises of tabes dorsalis was obtained.

Definite improvement was noted in the other forms of syphilis of the central nervous system.

Although the serologic changes did not parallel the clinical improvement, there were many in-

* We wish to express our appreciation for the kind cooperation of the Divisions of Dermatology and Neurology, Department of Medicine, of the University of California, in carrying out this study.

TABLE 1.—Pyrotherapy, *Tabes Dorsalis*

No.	Name	Age	Diagnosis	Chemo-therapy	Clinical Symptoms	Diathermy Treatments	Serology Before Treatment						Serology After Treatment						Remarks
							Blood W'ss'rm'nn	Spinal Fluid W'ss'rm'nn	Colloidal Gold	Protein	Globulin	Cells	Blood W'ss'rm'nn	Spinal Fluid W'ss'rm'nn	Colloidal Gold	Protein	Globulin	Cells	
3	B. B.	46	Tabes Dorsalis	4 Neo, 35 Bismuth	Optic atrophy	8	1931-----	1931++++	1232100000	-	++	3	Left shortly after pyrotherapy.			..	..	..	No change in sight.
7	W. E.	51	Tabes	Several yrs. of Neo Sal, Mercury, Bismuth	Severe rectal crisis and lancinating pains	33	1930++++	1930++++	234445322	..	..	..	1932++	1931++++ 1932++++	0000123332	-	+++	3	Marked symptomatic relief.
15	M. H.	58	Tabes	4 yrs. treatment Sal & Mercury	Lancinating pains	19	1932-----	1932-----	00000000000	-	-	-	1932---	1932---	00000000000	-	-	2	Relief from pains
27	A. S.	45	Tabes	36 Bismuth, 11 Salvarsan	Ataxia, eyes	8	++++	..	..	..	..	..	1932++++	1932++++	00123100000	..	..	..	Subjectively slight improvement. Objectively no improvement.
32	A. Z.	56	Tabes	Bismuth, Iodo, Bismotol	Gastric pains, lancinating pains	10	---	++++	111210000000	..	..	16	---	++++	1222100000	..	..	2	Marked relief of pain.
33	N. A.	43	Tabes	36 Neo, 76 Bismuth	Gastric crisis, pains	16	++++	+	11222100000	..	..	..	++++	---	12310000000	..	..	..	Pains definitely decreased.
46	C. W.	50	Tabes	35 Bismuth, 22 Neo, 14 Hg. Sal., Spinal dr.	Lightning pains	6	1929++	1929++++	3454321000	-	+	43	..	1933---	00000000000	-	-	-	Little clinical improvement. Serology negative, question if due to pyrotherapy.
39	W. O.	28	Tabes	17 Neo, 41 Bismuth	Lightning pains, ataxia	8	1930++++	1930++++ 1932++++	2233421000 00001233210	++++	++++	90 55	1932++++	1932++++	4432100000	..	..	..	Marked relief of pain. Less ataxia.
..	A. P.	28	Tabes	32 Neo, 51 Bis., 15 Hg. Sal.	Lightning pains	..	1924- 1925- 1927++ 1929--	1926++++ 1929++++	1233332110	++++	++++	..	..	Under treatment.		..	..	..	Marked relief of pains.
47	P. B.	42	Tabes	50 Neo, 30 Bis.	..	5	1930-- 1932--	1932-- 1932--	0000000000	-	-	4	..	Treatment interrupted		..	..	..	
43	M. C.	33	Tabes	96 Bis., 96 Neo.	Asymptomatic	8	1930++++ 1931++++ 1932++++	1932++++	00121000000	-	-	31	1933++++	1932++++	..	..	-	2	Asymptomatic.
40	F. C.	43	Tabes	12 Salvar., 12 Neosal., 10 Bis., Swift-Ellis	Lightning pains	8	1921++++ 1923-- 1932--	1923-- 1932--	00000000000	-	-	1	1932---	1932---	00000000000	-	-	-	No relief.
41	J. L.	45	Tabes	Very little treatment	Pains	5	1932++++	..	0012221000	-	-	3	Treatment not continued because of auto injury.						Marked relief of pain.
48	C. E. C. A.	53	Tabes	19 Sal., 55 Bis., Hg. & K. I.	Lightning pains	..	1930+ 1932++++	1930++++ 1932++++	0122211000 0012210000	+-	+-	3	..	1933++++	4443210000	-	-	2	Some relief of pain.
20	B. L.	55	Tabes	8 Silv., Arsph., 14 Neo-Arsph., 58 Bis.	Severe gastric crisis, lancinating pains	3	+++	..	1232100000	..	..	..	..	+		..	..	..	Relief of pains.
37	O. S.	46	Tabes	Neoarsph., Bismuth, Mercury, Swift-Ellis	Severe lancinating pains for 3 years.	8	---	---	0000000000	..	..	..	---	---	000000	..	..	..	Temporary relief. Cessation of pains.

Case 54—G. B.—Under charge of private physician. Obtained striking relief of pain after 5 treatments.

TABLE 2.—Pyrotherapy, Paresis

No.	Name	Age	Diagnosis	Chemo-therapy	Clinical Symptoms	Diathermy Treatments	Serology Before Treatment						Serology After Treatment						Remarks
							Blood W'ss'rm'nn	Spinal Fluid W'ss'rm'nn	Colloidal Gold	Pro-tein	Glob-ulin	Cells	Blood W'ss'rm'nn	Spinal Fluid W'ss'rm'nn	Colloidal Gold	Pro-tein	Glob-ulin	Cells	
8	C. E.	32	Paresis	74 Neo, 22 Mercury, 26 Tryp., 4 Salv.	Loss of mem-ory, mental confusion	8	1930++++	1931++++	5554421000	+	Trace	2	1931++++	1931++++	4443210000	—	Trace	6	Slight clinical improvement.
14	L. H.	29	Paresis	Neo. Sal. & Bis., 6 mos.	Mental confu-sion	8	1931++++	1931++++	435543200	..	..	63	1933++++	1933++++	0012332100	+++	+++	30	Serology done 1½ years after pyrotherapy.
24	W. P.	42	Paresis	100 Bis., 100 Neo.	Euphoria	7	1932++++	..	..	..	..	..	1933++++	1933++++	1232210000	+	+	5	No further deterioration.
21	S. N.	42	Paresis	62 Tryp., 36 Bis., 12 Hg. Sal.	Mental confu-sion, speech defect	5	1930++++	1930++++ 1931++++	445555432 5554321000	++++	++ --	24 —	1932++++ 1933----	1932++++ 1933++++	3455542000 0012332000	+++ +	++ +	1 3	Burns. No change.
28	C. S.	38	Paresis	26 Neo., 48 Bis., 10 Tryp., 12 Hg. Sal.	Mental confu-sion, speech defect	16	1930++++ 1931++++	1930++++ 1931++++	5555550000	++	++	15 ..	1932++++ 1933++	1932++++ 1933++	00012221000 5554310000	..	..	6	No further deterioration.
29	V. V.	49	Paresis	4 Trypar.	Loss of mem-ory, speech defect	5	++++	++++	455532000	..	..	..	..	..	..	..	..	..	Sent to State Hospital. Burns, temporary im-provement.
56	A. L.	45	Paresis	7 Neo.	Mental deteri-oration	8	1933++	1933++++	234443210	—	+	3	1933++	1933+	4444321000	—	+	7	Definite improvement.

TABLE 3.—Pyrotherapy, Asymptomatic Central Nervous System Syphilis

No.	Name	Age	Diagnosis	Chemo-therapy	Clinical Symptoms	Diathermy Treatments	Serology Before Treatment						Serology After Treatment						Remarks
							Blood W'ss'rm'nn	Spinal Fluid W'ss'rm'nn	Colloidal Gold	Pro-tein	Glob-ulin	Cells	Blood W'ss'rm'nn	Spinal Fluid W'ss'rm'nn	Colloidal Gold	Pro-tein	Glob-ulin	Cells	
1	M. B.	40	C. N. S.	58 Neo., 87 Bis., 12 Hg. Sal.	Asymptomatic	10	1928++++ 1930++++ 1931++++	1931---- 1932----	1234521111	+	—	—	1932++++ 1933++++	1932---	0000000000	..	..	..	Asymptomatic.
4	V. B.	39	C. N. S.	59 Salv., 26 Bis.	Eye signs	7	1928++++ 1931++++ 1931++++	1931++++	1124432100	+	—	50	1932---	1932++++	012100000000	—	—	16	Asymptomatic.
6	A. D.	47	C. N. S.	51 Bis., 58 Neo.	..	8	1929++++ 1930++++	1932++++	0000000000	..	..	..	..	Left clinic.	..	..	..	..	Asymptomatic.
31	A. Y.	..	C. N. S.	53 Neo., 87 Bis., 12 Hg. Sal.	Asymptomatic	8	1928++++ 1930----	..	134310000000	..	..	52	++++	1932----	0000000000	—	—	—	Asymptomatic.
35	C. B.	36	C. N. S.	78 Bis., 20 Bis.	Eye signs, ab-sent reflexes	5	..	1929++++ 1932++++	234210000000	+	++ ++	2 82	1933----	1933----	000000000000	—	—	—	Asymptomatic.
53	L. L.	39	C. N. S.	20 Neo., Bis., 37 Iodo Bis., 20 Bis., 6 Hg.	..	8	1933++++	1933++++	1233210000	..	+	4	1933++	1933++	5543211000	..	—	2	Asymptomatic.

TABLE 4.—Pyrotherapy, Tabo Paresis

TABLE 4.— <i>Pyrotherapy, Tabo Paresis</i>																			
No.	Name	Age	Diagnosis	Chemo-therapy	Clinical Symptoms	Diathermy Treatments	Serology Before Treatment						Serology After Treatment						Remarks
							Blood W'ss'rm'nn	Spinal Fluid W'ss'rm'nn	Colloidal Gold	Pro-tein	Glob-ulin	Cells	Blood W'ss'rm'nn	Spinal Fluid W'ss'rm'nn	Colloidal Gold	Pro-tein	Glob-ulin	Cells	
20	M. N.	35	Tabo Pare-sis	81 Bis., 4 Sal.	Ataxia, absent reflexes	15	1926++++ 1928++	1931++++++	4433321000	—	+	20	1932-----	1932-----	44433100000	—	—	4	Clinical improvement.
30	I. W.	37	Tabo Pare-sis	2 Sal., 1 Sp. dr'nage	Eye signs, ab-sent reflexes	5	..	1929++++++ 1932++++++	23421000000	+	++ ++	2 82	1933-----	1933-----	00000000000	—	—	—	

TABLE 5.—Pyrotherapy, Meningo-Vascular

TABLE 5.—*Pyrotherapy, Meningo-Vascular*

No.	Name	Age	Diagnosis	Chemo-therapy	Clinical Symptoms	Diathermy Treatments	Serology Before Treatment					Serology After Treatment					Remarks	
							Blood W'ss'rm'nn	Spinal Fluid W'ss'rm'nn	Colloidal Gold	Pro-tein	Glob-ulin	Cells	Blood W'ss'rm'nn	Spinal Fluid W'ss'rm'nn	Colloidal Gold	Pro-tein		Glob-ulin	Cells
34	I. S.	31	Men. Vasc.	6 Neo.	Headaches	20	—	+++++	..	—	67	—	—	2232100000	—	—	3	Marked improvement.
55	A. W.	28	Men. Vasc.	12 Sulp. Ars., 23 Neo., 104 Bis., 17 Hg. Suc.	..	4	1933 — — —	1931+++++	01122210000	—	168	Wass. — Kahn ++	1933+++++	554432000	..	+	8	Asymptomatic.

TABLE 6.—Case 56. A. L., Male, White, Age 45. General Paresis Spinal Fluid Examinations Following Each Pyrotherapy Treatment				
Date	Spinal Fluid Examination			
	Wassermann	Colloidal Gold	Globulin	
January 25, 1933 Before Pyrotherapy	Craig Method ++ = Strongly positive ++, ++, +, —	2344432100	+	3
February 13, 1933 Treatment No. 1	+, +, +, +, —	5555532100	+	8
February 20, 1933 Treatment No. 2	+, +, +, +, —	555553210	++	13
February 27, 1933 Treatment No. 3	+, +, +, — —	5555533100	+	9
March 6, 1933 Treatment No. 4	+, +, +, — —	5554310000	+	6
March 13, 1933 Treatment No. 5	+, —, —, —	5555432100	+	7
March 20, 1933 Treatment No. 6	+, —, —, —	4443210000	+	7

stances where the blood and spinal fluid findings changed for the better.
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DISCUSSION

H. J. TEMPLETON, M. D. (3115 Webster Street, Oakland).—The advent of hyperpyrexia in the therapy of central nervous system syphilis has certainly brightened the prognosis. Whereas paresis was formerly almost a 100 per cent fatal disease, approximately one-third of the patients can look forward to complete arrest from fever therapy. Moreover, sufficient time has elapsed to permit us to state that many of these arrested cases remain well permanently. In 1930 it was my privilege to have seen two of the original series of paretics treated by Wagner-Jauregg with malaria in 1919. Twelve years later they were in apparently good health and self-supporting, although they could not be called extremely alert mentally.

Evidence is gradually accumulating which shows that it is the actual fever which produces improvement, and not any immune process following the malaria. This should lead us to continue investigations of other methods of producing transient controllable fever. Of the methods known today, diathermy and radiotherapy would seem to be the most practical.



HELEN HOPKINS, M. D. (925 Pacific Mutual Building, Los Angeles).—Interest in thermotherapy, developed by the epoch-making observations of Wagner-Jauregg regarding the beneficial properties of malaria in neurosyphilis, has not only been unusual, but has proved to be of great practical value to mankind. It has been assumed that the heat generated within the body in this condition is chiefly responsible for the favorable results observed in so many patients. Other fever-producing measures subsequently utilized appear to have been effective in proportion to the height to which the body temperature could be raised, and also to the length of time maximum temperatures could be maintained without damage to the body.

Experimental investigation into the chemical and physiological changes developed within the human organism with subjection to hyperpyrexia baths broadens one's conception to include other therapeutic factors in addition to those of thermal nature. Well-defined states of alkalosis, anoxemia, water-shifting, and disturbances in ionic equilibrium make their appearance, resulting in alterations in surface tension, permeability of cells, and oxygen supply to the tissues. These conditions in conjunction with the thermal changes, in all probability function to create an environment which is noxious to invading parasitic organisms, inhibiting their growth and extension, and ultimately terminating in their complete destruction.

Doctor Beerman and his co-workers have presented valuable and instructive clinical material in this contribution. Their method for accomplishing and maintaining temperature elevation in human beings appears to be a safe, effective procedure.



RICHARD W. HARVEY, M. D. (Four Fifty Sutter, San Francisco).—In 1932 a patient was referred by me to Mount Zion Hospital for treatment with hyperpyrexia by the method described in this paper. His family physician had found his serology positive, but because of mental symptoms developing had sent him to me. He was confused, showed loss of memory, and his dysarthria and tremors were typical of paresis. He was given seven treatments at intervals averaging four days. During six treatments there was a secondary temperature rise occurring two or three times following the initial temperature rise, with a fall in systolic and diastolic pressure of slight degree. During the last treatment the patient had a convulsion accompanied by a marked fall in pressure, and the treatments were discontinued. Five days later he was discharged from the hospital remarkably improved mentally. He was clearly oriented, the tremor was gone, and there

was no speech defect. Serologically he was not improved. He was sent home with advice to continue conservative treatment with the referring physician. Several months later a letter described him as holding his improvement and requesting permission to return to work. A spectacular result such as this one has occurred before the days of artificial fevers during intercurrent infections. This observation led to the study of hyperpyrexia as a method of treatment in paresis. As compared with the malaria method, diathermy seems to me to be preferred for ambulatory cases, and there is not the physical suffering experienced by patients in the malarial paroxysms. Furthermore, the method does not depend on the success of an inoculation procedure. While the treatment is a success in restoring the mental status of a patient in only a small percentage of cases, it should be continued, with our encouragement, by the investigators at Mount Zion Hospital.



DOCTOR EPSTEIN (Closing).—Artificially produced hyperpyrexia has become an established method of treatment of neurosyphilis. Beneficial results are obtained by the use of fever which cannot be duplicated by chemotherapy. It is generally agreed that the elevation of body temperature is the essential factor in this type of treatment, rather than some specific action of the agent producing the hyperpyrexia.

This field of investigation is still in an experimental stage. It is very probable that diathermy or radiotherapy will be replaced by some more simple method of elevating the body temperature. We have been able to obtain very satisfactory fevers in patients by the use of a heat cabinet, which will be described in a later report.

THE LURE OF MEDICAL HISTORY*

FIFTY YEARS OF PROGRESS IN THE PREVENTION OF DISEASE†

By J. C. GEIGER, M. D.

San Francisco

v‡

PELLAGRA

THE history of the relation of pellagra to diet is fascinating. Pellagra was described by Casol in 1735 in northern Spain. It is common in Italy and some of our southern states, and not unknown on the Pacific Coast. It is a disease involving the nervous system, the digestive tract, and the skin, with its remarkable symmetrical erythema on special locations on the body. The variety of work performed in the study of this disease, and the many theories as to the causative factors, cannot be discussed here. Suffice it to say that Goldberger and his associates found that in institutions more cereals and vegetables were used than in the diets of other people who were immune. Those who were free of the disease ate more fresh meats, eggs, and milk. These investigators, to prove their point, carried on their work in a state prison and offered pardons to any healthy persons

* A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of CALIFORNIA AND WESTERN MEDICINE. The column is one of the regular features of the Miscellany Department of CALIFORNIA AND WESTERN MEDICINE, and its page number will be found on the front cover index.

† One of a series of public lectures by invited speakers, conducted by the Stanford University School of Medicine. From the Department of Public Health, San Francisco.

‡ Part I of this paper was printed in CALIFORNIA AND WESTERN MEDICINE, November, page 327; Part II, December, page 406; Part III, January, page 40; Part IV, February, page 110; Part V, in this issue, completes this paper.

who allowed themselves to be fed experimental diets. Eleven were chosen. The diet consisted of white wheat flour, degerminated cornmeal, polished rice, starch, sugar, molasses, pork fat, sweet potatoes, collards, turnip greens, and coffee. Six of the men developed pellagra. Goldberger, however, went further. He inoculated himself and fifteen associates with blood, nasosecretions, feces, urine, and desquamating epithelium, with negative results. It remained for Smith and Hendrick to find that yeast, after autoclaving under pressure to destroy the antineuritic factor, still contained an essential factor. The preventive diet factors for this disease are, therefore, yeast, lean meat, milk, and eggs, and perhaps the yellow pigment-carrying foods, such as butter and carrots.

DIETARY AND DEGENERATIVE DISEASES

Teachers, nurses, parents, and children need to be taught adequate nutrition, the need of rest and the difficulties that follow chronic fatigue. Physical defects that interfere with growth, or aid infection, should be removed or corrected. The steadily mounting death rate from heart disease, Bright's disease, and cancer, overshadowing as they do all other causes, makes it imperative that this challenge be met. It can best be done in the early years of life, and it behooves parents to set the examples of hygienic living for the imitative tendency of children to be put in action. To the degenerative diseases, looming so large, many predisposing factors are listed, of which at least four are related directly or indirectly to nutrition habits. McCollum asserts that, of the factors in our physical deterioration, the chief one may lie in the unwise choice of food. McComber, in his studies of the diets of sterile women, has suggested that the glandular dysfunction may have been preceded by unsatisfactory dietary habits. More recently, Langstroth, analyzing the histories of over five hundred patients, has this indictment of American dietary: it is low in vitamin and residue, high in calories, in carbohydrate, and in its ratio of acid to alkaline ash-forming foods. This writer remarks that certain primitive people are free of our chronic diseases, and an introduction of the white man's food has meant introduction of the white man's diseases.

Correction of diets may afford relief in degenerative disease, particularly because of reduction in the food consumption and burning up load, or metabolic load, with subsequent fall in blood pressure and, therefore, diminished work for the heart or cardiac load. Langstroth goes so far as to state that individuals have inherent differences as to vitality or resistance of tissues in the follow-up repair of corrected diets. In fact, some of us are born with poor rubber in our arteries. The conclusion is that American diets contain too much concentrated foods, low in vitamins, residue and alkaline minerals, and high in carbohydrates and acid minerals. Economic betterment, however, gives the city dweller the advantage as to vegetables and fruits over the rural dweller, who, in some localities, avails himself least of such foods.

The usefulness of the white rat has been mentioned before. It resembles man because of its

omnivorous feeding habits. Its developmental cycle is thirty times more rapid than that of man. Data as to diets and growth have been thus made available, and the results of the optimum diet appear to be as follows: uninterrupted growth, normal reproduction, prevention of premature ageing (mothers successfully raising their young), development of strong bones and sound teeth, and the building up of bodily resistance to infections.

The problem for the physician, the parent, and the teacher is to prevent malnutrition among children, thereby materially assisting them to live longer and better. The habits of the middle-aged may be too deep-rooted to change, and economy or "girth-control" is placed on the seasoned adult and not on the child. It must not be forgotten that between-meal ice cream (15 cents) of 500 calories and 7 grams of protein; ten-cent candy bars of 450 calories; chocolate milk-shake (15 cents), 500 calories and 15 grams of protein; when compared with a quart of milk at 12 cents, 700 calories and 33 grams of protein, suffer severely in the comparison.

THE PUBLIC ASPECTS OF HEART DISEASE

There are no logical limits to the service that a health department may perform; a study of any disease may offer some measure of control. Limitation of immigration, the falling birth rate, and the increase of the average age, year by year, are accompanied by increases in certain diseases in some of the older portions of the United States; therefore, each year there must tend to be a larger portion of the population affected by chronic disease in advanced age groups.

Heart Disease in the Adult.—The increasing annual mortality rate from diseases of the cardiovascular system has been demonstrated by many workers. Infectious fevers may cause inflammation of the lining and the covering of the heart. Rheumatic fever, pneumonia, and scarlet fever, as well as the epidemic influenzas, have, as their complication, valvular disturbances and impairments. Though the original disease may have been dissipated, the injury to the heart muscles still remains. The whole arterial system may suffer from a chronic inflammation such as might be brought on by active syphilis. Rheumatic fever is on a par with syphilis as a cause of heart disease. The inflammatory valvular diseases of the heart that may involve the mitral value are perhaps of rheumatic origin and date back to childhood. Lesions seated in the aortic valve probably arise in adult life, and quite often syphilis is the cause.

Endocarditis may be aggravated by, or may or may not follow, a prophylactic tonsillectomy to the extent of even an active septicemia. Bacterial infection of the endocardium begins as a sequel of the focal infections in the mouth, nose, ears, or accessory sinuses. The futility of treatment in these cases is well known.

Vascular degenerative diseases are not reportable to the health department; yet the hazards, especially the industrial hazards, to the public health are no less important than typhoid carriers, cases of leprosy, etc. This is particularly true in the cardiac cripple's operating a motor car.

The question of tonsillectomy as a preventive measure against rheumatic fever is argued more today than ever before. This operation in the last forty years has been performed with rapidly increasing frequency, but childhood rheumatism is not infrequently seen, despite the fact that the average child today is tonsil minus. In 1930 and 1931, 2550 tonsillectomies were performed at the San Francisco Hospital, 1909 being of school age, and 359 being of preschool age.

It is no news that heart disease exists everywhere, nor does its existence mean an acute public health problem, even though the disease causes one-eighth of all deaths of all ages, and one-fifth of all deaths beyond the age of forty. Patients' costs for hospital admissions have an average range of \$100 for care and \$100 from loss of work. When you consider that the cardiac cripple is a repeater during a year, the financial losses to the community mount to millions of dollars annually. The cardiac center, or the clinic with the coordination and unifying of all activities for combating the disease, is amply justified.

Statistical Data.—The age grouping may be of significance, especially in San Francisco, for reasons to be brought out later. The percentage of age groups is comparatively the same until those of twenty-five to twenty-nine years, when it reaches 12 per cent; those of thirty-five to forty-four bring it to 18 per cent, and those of forty-five to forty-nine to 14 per cent, when it assumes a decidedly downward trend until it reaches one per cent at seventy-five years. In San Francisco 46 per cent of the population is in age groups over 35 per cent.

In 1913 Cleveland had the lowest death rate from heart disease, 118.0 per 100,000. In the same year San Francisco's rate was twice as much, 241; Boston's, 211; Chicago, Detroit, Los Angeles, New York, and St. Louis in 1913 had practically the same mortality rate. It is astonishing to note that each city in this list, except San Francisco, has had marked increases year by year until Boston reached the grand total rate of 319 in 1928, and only two cities were under 200, Cleveland and Detroit. In the sixteen years under consideration, the rate of San Francisco in 1913, 241, had not increased in 1928 and in 1930; but this period was marked with fluctuations, the highest rate appearing in 1926—285. This step-ladder-like increase in many of the cities may be due in part to the fact that the older cardiac age groups are top-heavy. The reason for San Francisco's steady rate is obscure.

The social status may be of interest, since the number of deaths from 1921 to 1930 has been about the same in the unmarried, while the deaths in the married groups are nearly five times greater, and the rate is steadily increasing in the divorced groups. The number of deaths in Chinese, as could be expected, steadily increased from 1906 until 1921, when they have grown less. Perhaps of some interest is the fact that the deaths in the foreign-born double those of our own nativity, and this rate continues to be manifest in various yearly periods. There has been no noticeable

change in the percentage of deaths in hospitals, for in 1906 it was thirty-one, while in 1930 it was forty-two.

Heart disease still continues, as it has through the entire decade, the leading single cause of death, the rate for 1930 being 241.88 per 100,000 population, a higher rate than was found in either of the two preceding years. A total of 1549 deaths from heart disease occurred in 1930: 954, or 61.5 per cent, male; 595, or 38.5 per cent, female. Ninety-four per cent of these deaths occurred in the age group over forty. Some of this high rate may be due to the fact that San Francisco has a high age average in its population. However, definite rates in age groups cannot be established, since the age distribution of our population under the present census will not be known until the publication of the census findings.

A study of the relationship existing between early childhood infections and various types of heart disease in later adult life offers an interesting statistical problem, but one impossible of definite analysis without individual histories, which cannot be gathered from the incomplete data on death certificates.

THE RÔLE OF PREVENTIVE MEDICINE

If it is urged upon health officials that acquisition of more knowledge is badly needed, it is only in order that the beneficent mission and influence of the medical profession may be fulfilled in the field of preventive medicine and in national economics. For example, the high cost of infant mortality.

Statistically, the potential value of a baby at birth is approximately \$10,000 in actual money, not affection. Infant mortality, therefore, has an enormous effect on prospective national wealth. For instance, in 1928, 133,719 babies died, with a financial loss of over \$1,003,000,000.

It can generally be admitted that practically every disease affecting the human being is susceptible to some measure of control. The health officer of the future must assume the responsibility of guiding the attack on these. Control does not mean the application of police power, the making and passing of new ordinances, or presuming that ordinary quarantine is continuously effective. The medical profession should have intelligent and serious regard for such matters, and give them their active cooperation. The medical school must realize that the undergraduate curriculum must admit preventive medicine, perhaps in the fourth year. The health officer is aware that 30 per cent or more of confinements occur without medical attendance, and about three million women die from abortions, miscarriages, premature labor, or accidents at delivery. The health officer is also aware of 700,000 cases of communicable and preventable diseases in children; the problem of malnutrition involving at least four million more; the problem of physical defects, such as vision, adenoids, tonsils and teeth, involving at least twenty million. Surely preventive medicine is the most profitable future field of practice.

San Francisco Department of Public Health.

CLINICAL NOTES AND CASE REPORTS

ZINC IONIZATION IN THE TREATMENT OF NASAL SINUSITIS

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INFLAMMATORY states in the nasal mucosa and sinuses are the results of vicious cycles; first, there is an interference with the normal action of the cilia and mucinous covering of the nasal mucosa; there then ensues the typical inflammatory reaction in the mucous membrane, according to duration—acute if early, chronic if long continued. In the latter state there is a hyperplasia of the mucous membrane about the ostia of the various sinuses impeding drainage and aeration with an eventual sinus involvement, if none were previously present, or with a continued sinus involvement if the reverse were true.

In the effort to shrink the nasal mucosa and to promote aeration and drainage in the sinuses, a host of drugs and medicaments have been used with more or less beneficial results. Objections, however, were found either on a physiologic or pathologic basis to camphor, menthol, eucalyptol,^{1,2} epinephrin hydrochlorid,^{3,4} hypertonic solutions,⁵ oily solution,⁶ and cocaine,⁷ while none or little could be found against ephedrin hydrochlorid,⁴ isotonic solutions,⁵ and aqueous solutions.⁶ Organic silver salts have some shrinkage effect, but not to the same extent and permanence as with zinc ionization.⁸

In a small series of forty cases in which there were positive roentgen findings for the anterior series of sinuses, I found antral irrigations, ephedrin sprays and hot argyrol tampons of little avail to relieve the persistent symptoms of impaired breathing due to turbinal engorgement and persistent postnasal discharge. There were no apparent indications for any intranasal surgery; the septa were fairly straight and regular without impingement against the lateral nasal wall, and the antral washings did not point toward any bone involvement. Ephedrin improved the breathing only temporarily and the argyrol packs placed under the middle turbinate reduced the discharge to some extent; but symptoms of a low-grade inflammation would flare up, if treatment were discontinued for even one month.

It seemed, therefore, that the vital point to attack would be the inflamed mucosa around the ostia within the middle meatus—the so-called “drainage area” for the anterior series of sinuses—and that zinc ionization might prove to be the logical astringent agent. Before instituting this method, however, cotton strips saturated with one per cent zinc sulphate solution were placed, as a control, under the middle turbinate of each patient for fifteen minutes for from three to six times, to ascertain if any benefit would be derived therefrom; but not the slightest amelioration of symptoms ensued.

TECHNIQUE OF METHOD

The technique of treatment in these cases consisted, first, of thorough shrinkage of the middle turbinate on the side involved; the ephedrin pack (3 per cent solution) being placed above the inferior turbinate and beneath the middle turbinate, thus filling the middle meatus as tightly as possible. This pack is allowed to remain in place for fully fifteen minutes. If the middle turbinate were close to the lateral nasal wall, it would be gently infracted medially toward the septum, to allow easier access to the hiatus semilunaris. A strip of cotton saturated with one per cent zinc sulphate solution placed on a zinc wire (attached to the positive pole of a galvanic battery—five milliamperes) would then be inserted tightly within the middle meatus, and as closely as possible to the lateral nasal wall, and allowed to remain in place for twenty minutes. At first there would be a sensation of burning in the nose, and some would complain of a metallic taste in the mouth; but this would soon wear off. After the insertion of this positive electrode, the patient would lie on his side with the same side of the head dependent as the side of the nose under treatment. A few drops of the zinc sulphate solution would be dropped from time to time onto the cotton pledget with a long thin pipette and the residue allowed to trickle down the nose. Care should be taken in both starting the current slowly and stopping it just as gradually, in order to avoid any unpleasant reaction. The indifferent or negative electrode should be saturated with normal saline and held in the palm of the hand.

COMMENT

This method was used in a series of forty patients whose symptoms were persistent postnasal discharge and impairment of breathing; and the positive findings in whom consisted of mucous membrane thickening in one or more of the anterior group of sinuses, as shown by roentgen ray and mucus shreds in the antral washings. Allergy was ruled out by the history, and by the appearance of the turbinal mucosa.

Of these forty patients, twenty-eight complained of postnasal discharge alone, while twelve complained of both postnasal discharge and impaired breathing. Of the twenty-eight, a total of twenty-one were symptom-free after twelve treatments and seven were not relieved after eighteen treatments. Of the twelve remaining patients, seven were symptom-free after twelve treatments, while five were not relieved after eighteen treatments.

After a follow-up of twelve months, those who were relieved were still symptom-free, but those who showed no results after this form of treatment, did improve either after a window resection or amputation of the anterior tip of the middle turbinate, or both. This can probably be explained by the fact that access to the ostia via the hiatus semilunaris was more difficult in these cases, due to anatomical peculiarities, and, therefore, aeration would be possible only by the surgical procedures mentioned.

Although this method is not a cure-all, it should be seriously considered as a valuable adjunct to the

therapeutic armamentarium in nonsurgical intranasal therapy, where no results have been otherwise achieved with time-honored medicaments.

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TETANUS?

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REPORT OF CASE

MR. F. O., grocery clerk, single, age 35, weight 178 pounds, height 6 feet. Health up to the date of injury, good. On April 29, 8 a. m., Mr. O. stepped on a nail in his garage. The nail penetrated the foot beneath the metatarsophalangeal joint of the left great toe, evidently entering the metatarsal bone. The board, through which the nail had been driven, was "pried" from the foot, and the extremity immediately "soaked in zonite for one-half hour." The patient then drove seventy-five miles to a neighboring town, to find his plans for the day interrupted by severe pain in the foot and leg. At 12:30 p. m., a physician was consulted, who probed the wound and gave 1500 units of tetanus antitoxin in the right deltoid muscle. Mr. O. returned home at 6 p. m. and again soaked his foot in zonite. The pain, which had extended into the thigh, increased gradually in severity, necessitating further medical attention. The patient was seen in his home at 12:30 a. m., April 30, at which time he was lying on a couch moaning and groaning, with a temperature of 99 degrees, pulse 100. There was slight redness about the wound, some swelling of the toe and adjacent parts, and excruciating pain and marked tenderness in the toe and foot. Muscle-twitching was easily elicited by gently tapping the foot, leg and thigh muscles. Any movement of the foot or leg was accompanied by much pain. Vague dorsal pains were complained of, especially of the left side, as high as the sixth thoracic vertebra. There was no indication of muscle spasm other than when the limb was moved or tapped, and this seemed more like rigidity due to pain. The patient was already mumbling and speech was becoming incoherent. Questions were answered very briefly, often incompletely, and sometimes only after two or three repetitions. Morphine sulphate, grain one-quarter, was given at once subcutaneously and 10,000 units of tetanus antitoxin were given intraspinally, and another 10,000 units intravenously. The patient was ordered to the hospital, which he entered at 1:20 a. m. in care of a special nurse. The puncture tract was laid open by a one-inch incision, the wound packed with gauze, and the dressings kept soaked with hydrogen peroxid. A maximum temperature of 100.2, pulse 92, was recorded at 5 p. m. At 6 p. m., 10,000 units of tetanus antitoxin were given intravenously and another 10,000 units intramuscularly. Very little change was noted up to this time. The moaning and groaning and restlessness continued until midnight of May 1. The patient states that he has only a fragmentary recollection of events which occurred between 11:30 p. m. April 29 and 6 p. m. April 30. Morphine was used to control the intense pain, and

this may have necessitated catheterization for thirty-six hours. By the afternoon of May 1 the pain was restricted to the region below the knee, and the clouded mental condition had disappeared. Tapping the muscles no longer elicited any reaction. There was never more than a slight serosanguineous discharge on the dressings, and cultures in solid media, made of smears from the wound, remained sterile. The wound promptly began healing as soon as the gauze was removed. The patient left the hospital May 2, and the case was dismissed on the 19th. There have been no ill after-effects.

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PROLAPSE OF THE CERVIX AT TERM*

By ELIOT SORSKY, M. D.
AND
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THIS case is reported because of the rarity and the apparent lack of references to the condition in current literature. In many of the standard obstetrical textbooks the subject is either omitted entirely or dismissed with the reminder that the condition is quite rare. The late J. W. Williams had never had such a case and felt that prolapse of the cervix at term is a mechanical impossibility.

The following is a résumé of the history and course of labor in a patient having a prolapse of the cervix.

REPORT OF CASE

Mrs. De la R., a Mexican woman, aged twenty-three years, presented herself for prenatal care at the outpatient clinic of the General Hospital of Fresno County on July 13, 1933. Her last menstrual period was November 25, and confinement was expected on September 1. One previous pregnancy had been entirely normal. There had been no miscarriages.

Pelvic measurements: I. S., 25; I. C., 28; I. T., 29; Baud, 18.

Internal measurements were not taken. General physical examination revealed no abnormalities. Blood pressure was 112/72. Urine and Wassermann tests were negative. The patient was again seen on July 21, at which time she complained of slight vaginal bleeding of three days' duration. Hospitalization was refused by patient, and she was sent home with advice to remain in bed. Patient was again seen on July 27. Examination at this visit showed the cervix projecting about three and one-half centimeters beyond the vulval outlet. There were no signs of erosion or cervical infection. Following the patient's admission to the hospital, the cervix was replaced in the vaginal cavity under sterile technique. The patient left the hospital on July 23, against the advice of the attending physician. She again presented herself on July 27, and examination revealed the same degree of cervical prolapse as on the former admission. She was again admitted to the hospital and the cervix was again replaced. Examination at this time showed a cervix of normal appearance as to size and consistency. The os easily admitted one finger, and on palpation the presenting head could be easily felt. The lower uterine segment appeared thick, and it was felt that the previous vaginal bleeding might have resulted from the abnormal stretching of the upper uterine segment, causing a slight separation of the placental site. After replacement of the cervix the patient was placed on strict bed rest. On August 7, under aseptic precautions, the vagina was packed with mercurochrome-soaked gauze, and the patient was allowed to be up and about. The packing was expelled the following day and the patient was once again placed in bed. No

* From the Fresno County General Hospital, Fresno.

abnormal symptoms arose and on August 15, at about 2 a. m., the patient first noted the onset of labor. Pains were of good duration and rather short intervals. The patient was placed on the delivery table at 11:35 a. m. At this time the membranes were protruding beyond the vulval outlet and were in contact with the perineum. Rectal examination showed the cervix to be eight centimeters, dilated with about 80 per cent effacement; the head was just on the pelvic floor. It was felt that rupture of the membranes would lessen the danger of infection because of continued contact of the bag of waters with the perineum, and would also facilitate retraction of the cervix over the advancing head. Following artificial rupture of the membranes at 11:48 a. m., repeated rectal examinations revealed a gradual retraction of the slowly thinning cervical margin. At about 1 p. m. dilatation was practically complete and at 2 p. m. the patient was delivered of a 6-pound 14½-ounce normal female infant. Presentation was occiput right anterior. The cervix, following delivery, remained well up in the vaginal vault; there were no cervical or perineal tears. Postpartum convalescence has been normal and the cervix has shown no tendency toward further prolapse.

COMMENT

From a study of the case presented and a review of the current literature, the following generalizations are formulated:

1. Prolapse of the cervix at term is rare, but does occur.
2. Conservative treatment, consisting primarily of bed rest, is advised. Cervical erosions or infection should be treated by antiseptic douches only during the early months of pregnancy because of danger of ascending uterine infection.
3. Pessaries or other internal methods of support are not advised, particularly during the latter months of pregnancy, because of increased dangers of infection and the possibility of inducing premature labor.
4. Conservative waiting usually results in successful termination of the pregnancy.

ALLERGIC SCABIES

By MOSES SCHOLTZ, M. D.
Los Angeles

THE following case is deemed worthy of a brief record because of the instructive clinical lesson it carries.

REPORT OF CASE

A. O., aged seventeen, female, came in complaining of a severe itching skin eruption of seven months' duration. For the last six months the patient had been under the care of an allergist of recognized ability, who had diagnosed the condition as an "allergic eczema." The patient had been found sensitive to a number of foods. After the withdrawal of these foods, the patient thought that she felt better, but the improvement was only temporary and uncertain in character. Gradually the itching returned, and the skin eruption had slowly spread until, when seen by us, it involved both upper limbs and lower, the anterior part of the trunk and the gluteal regions. The localization and the morphologic picture of the eruption was so typical of scabies that that diagnosis suggested itself at once as the most likely if not the only one to be considered. Hurried casual microscopic search for acarus was negative. However, the clinical impression was so definite that antiscabietic treatment was instituted, and all dietetic restrictions were removed. The relief of itching was prompt and definite. In ten days both

the skin eruption and the itching cleared up completely, leaving only dark pigmented spots, so often seen in scabies and pediculosis of the body.

A few days after the first visit, the patient's mother came in complaining of an eruption and itching of the hands. The eruption was of frankly scabietic nature and yielded at once to the treatment. At this time the patient recalled that seven months before she had slept in one bed with one of her girl friends. The records of our office showed that exactly at that time the friend had been treated for scabies.

The clinical implication of the case is that the mere fact of the positiveness of skin tests, and even the clinical findings of the hypersensitiveness of the patient to certain foods, does not establish the causal relationship of the skin eruption: and that the morphologic differential diagnosis of a skin eruption should not be underrated and omitted before the treatment is instituted.

1930 Wilshire Boulevard.

Births in Maternity Hospitals and Homes.—In 1932 there were 78,108 births registered in California. Of this number, 50,280 (64.4 per cent) occurred in maternity homes and hospitals scattered throughout the state. In 1931, 62.2 per cent of all births occurring in the state were in maternity homes and hospitals. It would thus appear that more prospective mothers are demanding hospital and maternity home care during childbirth. The infant mortality rate for the state in 1932 was 52.8, while the infant mortality rate in maternity homes and hospitals was 27.3. The state maternal mortality rate in 1932 was 5.7, while the maternal death rate for maternity homes and hospitals during that year was 3.6.

A total of 2,186 cesareans was performed in maternity hospitals of California last year. This enormous number of such operations is appalling and may provide food for considerable thought upon the part of the women of California. The percentage of cesareans to confinements in hospitals and homes was 4.4 per cent.

Of the 50,280 births which occurred in institutions last year, 11,322, or 22.5 per cent, occurred in county hospitals. The infant mortality rate and the maternal mortality rate in county hospitals was considerably higher than in other institutions. The infant mortality rate for county hospitals in 1932 was 49.8 and the maternal mortality rate for that year in county hospitals was 7.3. A total of 321 cesareans was performed in county hospitals last year. The percentage of cesareans to confinements in county hospitals was 2.8 per cent.

In maternity homes and hospitals other than county hospitals last year, 39,412 births were recorded. The infant mortality rate for such institutions was low—20.2. The maternal death rate was also very low—2.5. On the other hand, the number of cesareans performed in such institutions was very high, the total number having been 1865. The percentage of such operations to confinements was 4.8 per cent.

The data upon which this report is based was gathered by the Bureau of Child Hygiene of the State Department of Public Health by means of circular letters addressed to maternity homes and hospitals of California. Under the law, these institutions can operate only under license obtained through the State Board of Public Health. The tabulation is interesting in that it indicates the modern trend of California mothers in seeking institutional care at childbirth. The proportion of births which occur in such institutions increases slightly each year.—*Weekly Bulletin, California Department of Public Health.*

Sport, which still keeps the flag of idealism flying, is perhaps the most saving grace in the world at the moment, with its spirit of rules kept, and regard for the adversary . . . (John Galsworthy, 1925).

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

CONSTITUTIONAL PSYCHOPATHIC STATE

THOMAS J. ORBISON, M. D. (1930 Wilshire Boulevard, Los Angeles).—In discussing the etiology and symptoms of the constitutional psychopathic state, I would respectfully advance the following opinions as results, in part, of certain researches which have entailed the personal examination and clinical study of several hundreds of "problem individuals" and their heredity.

I am convinced that there are, at the least, three principal etiologic factors and, according to their relative importance, these may be listed as:

1. Heredity (*e. g.*, with tuberculosis, alcoholic, psychotic factors, etc., in one or both parents as dominants).

2. Hyper- or hyposensitivity of brain parenchyma by reason of prenatal or very early disease factors, etc.

3. Acquired characteristics especially observable in the emotional sphere, but which by their imperative domination, influence the intellectual sphere and result concretely as judgmental deviation from the expected normal.

As to heredity: According to Conklin and other biologists, "psychological traits" are transmissible (in the hereditary elements) in the same manner as are physical traits, *e. g.*, color of eyes, skin, and hair; straight or curly hair. If this dictum be true *in toto*, or in the main, then one is on a firm scientific foundation in claiming hereditary values for all constitutional states that possess psychic deviation components, *e. g.*, feeble-mindedness, constitutional psychopathy; psychotic or epileptoid soil prior to the incidence of the disease factor.

As to hyper- and hyposensitivity of brain parenchyma, one sees little in the literature, but much in clinical observation of adequate masses of cases (*i. e.*, studied material).

Acquired psychic characteristics ("good" and "bad") are so frequently observed both in large numbers of "segregated" bodies of human beings under supervision (*e. g.*, in penal, military, and other institutions) and frequently even in selected individuals also under supervision still more intensive in character, that but little doubt may be entertained as to acquired characteristics being engrafted upon a mental soil already sensitized by heredity or disease factors and in direct ratio to the intensiveness of the supervision and administration of it will be the results (both good and bad), as it has to do with the individuals who are administered.

As to treatment, therefore, coöperation, non-coöperation and susceptibility, all enter into the

"plans" imposed and have a great deal to do with how they "work," especially if applied in early life.

It may be trite to suggest that when more knowledge is obtained relative to sensitivity of brain parenchyma and to the factors (such as toxic, etc.) influencing it—plus more instruments of precision than those at present at our disposal—that vistas and channels of approach will be opened up that will at least give us a truly informative grasp upon the underlying etiologic factors back of the "fruits of the mental soils," so to speak, of mental deviates.

Symptoms.—Inasmuch as we are dealing with psychic components, and because personality in the individual is the sum of his psychic components, and, further, that the objective symptoms of personality are behavior phenomena, we thus come to the logical conclusion that behavior phenomena are the important symptoms which must be studied, classified, and evaluated whenever an attempt is made to determine the personality of any individual. If these phenomena are pathological and show underlying psychic deviation from the normal, then it becomes necessary to apply what yardstick measurements we have at our disposal in order categorically to place that particular person's status. This involves and implies on the part of the examiner that he possesses a true "set" of definitive formulations and can apply them successfully. Thus far there is too much deviation in the opinions and formulations of psychiatrists to warrant at this time a sufficient unanimity of opinion such as will be helpful either to psychiatry as a whole, or to her ally, medical jurisprudence.

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H. DOUGLAS EATON, M. D. (1136 West Sixth Street, Los Angeles).—The symptoms in constitutional psychopathic states consist of conduct disorders due to the instinctive and emotional defects from which these individuals suffer. Such defects characteristically result in uncontrollable impulses to satisfy present desires and inability to profit by experience. The constitutional psychopath is faulty in judgment and lacking in foresight. Though they evidence no definite concrete type of mental symptomatology, these psychopaths express in a great variety of ways the fundamental condition existing, namely, a constitutional lack, emotional and instinctive, rather than intellectual. Such individuals appreciate intellectually a given situation, but are quite incapable of making a normal adjustment due to emotional instability, poor judgment, and character faults.

Constitutional psychopaths are born, not made; consequently the early symptoms of this condition are to be found in childhood. Undue emotional

instability may be first evidenced by bed wetting, night terrors, or tantrums. Obviously, however, these symptoms alone should not condemn a child as constitutionally abnormal. Untruthfulness, extreme lack of response to discipline, unusual likes and dislikes, undue timidity or aggressiveness, cruelty to other children or to animals, and a marked disregard of the rights of others, are to be found in varying degrees in the early history of the constitutional psychopath.

At a later date, the untruthfulness progresses to pathological lying, the disregard of the rights of others to stealing, while abnormal sex inclinations or practices make their appearance. Emotional instability, lack of judgment, and character faults result in a poor social adjustment practically as soon as social contacts are formed. In periods of stress and strain, aid is sought in alcohol or drugs, and addiction usually follows. Under these conditions judgment becomes further warped until, sooner or later, the typical constitutional psychopath comes into conflict with the law. The incorrigible child becomes the prostitute or vagrant, the chronic alcoholic or drug addict, the radical or anarchist, the sex offender or criminal.

Though attempts at symptomatic classification in this group of cases have been unsatisfactory, certain special types are worthy of mention.

A definite percentage of these individuals present a neurasthenic or psychoneurotic syndrome differentiated from the purely functional group by greater intensity and fixation of symptoms and reactions. Such cases do not respond to treatment, and remain permanently inadequate.

Another group is made up of the "cranks" and poorly balanced persons who supply material for the radical, fanatical cult movements now so prevalent. Some of the group may be brilliant or near-geniuses, but they lack consistency of purpose.

Psychiatric study of juvenile delinquents—"ne'er-do-wells" and "black sheep" wanderers, vagrants, and prostitutes—has demonstrated that more than a majority of such individuals are constitutionally defective and belong in the grouping we are discussing. The characteristic finding is a consistent lack of response to ordinary social demands.

Pathological liars and swindlers are often successful in perpetuating gigantic hoaxes, entailing great financial and emotional suffering to many innocent people. Many such persons are constitutional psychopaths—a fact often forgotten or neglected in dealing with these offenders legally.

The various forms of persistent sex aberrations are placed in the group of constitutional psychopathic states. Here we may see all degrees of quantitative or qualitative variations in the sex instinct. Frigidity and eroticism, inversions and perversions of many varieties, present social problems which often result in conflict with the law. Kleptomaniacs and pyromaniacs are constitutional psychopaths, thought by many to belong in this particular subdivision.

The diagnosis of constitutional psychopathic state rests on no absolute objective findings and, as in functional nervous disorders, must be reached by the process of exclusion. A detailed and reliable history of the individual's early life is essential; for the condition, being due to constitutional defect, must be lifelong and constant. Furthermore, the defect must exist in the instinctive and emotional fields—not in the intellectual. Defective intelligence has its own recognized grouping, mental deficiency, as well as positive methods of diagnosis. All other recognized types of mental illness, such as dementia praecox (schizophrenia) and the manic depressive psychoses, must be excluded. The possibility that physical disabilities may bear a causal relationship to conduct disorders must not be forgotten.

Summary: A lifelong inability to adjust to ordinary social and environmental conditions, as evidenced by various forms and degrees of conduct disorders in the absence of any other recognized mental disease, justifies a diagnosis of constitutional psychopathic state.

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CLIFFORD W. MACK, M. D. (Livermore Sanitarium, Livermore.) — The treatment of constitutional psychopathic states is naturally diverse because of the variety of psychiatric conditions coming under this classification. The very name indicates a lack of precision and definiteness in diagnosis. It comprises many border-line states that do not fall within the confines of other well-recognized clinical entities. Therefore treatment must be individualized to a greater degree than would otherwise be the case. The requirements for each patient can only be determined after a thorough survey of that patient's life history.

The medical concept covers a wide range of personality types from those possessing outstanding genius, which frequently overshadows the psychopathic defects, to those patients who are often in trouble as the result of disabilities such as hysteria, functional nervous disorders, social misfits, criminals, alcoholics, drug addicts, and sexual degenerates. There is, however, common to all, the fundamental personality make-up, and an emotional instability described so aptly by Salmon: "Constitutional psychopaths have an undoubted constitutional tendency to react to difficult situations in a neurotic or psychotic way, or have defects in volitional or emotional control which make adaptations that are very simple for others very difficult for them." This condition, found in all these individuals, affords a basis for the formulation of treatment.

In the first place it is necessary to recognize that we are dealing with a disorder that is psychic in nature, and hence therapeutic efforts must be along psychological and social lines. Although the study of a particular patient must comprise a thorough physical examination, as well as a social and psychiatric investigation, treatment directed solely to the physical status deserves only secondary consideration. The minor place given to such treatment should be thoroughly recognized by both

patient and physician, as otherwise the main mode of attack may be entirely misdirected and its value lost. All surgical or special medical procedures to correct the mental defect should be avoided except as emergency measures. There is a tendency in all of us to seek something in our patients that can be irradiated by surgery, or to find some vital function, allied to the one at fault, that can be modified by chemical means. The psychopath is only too prone to hide behind such excuses for his weakness and not face the fact that he possesses some inherent personality derangement. The writer recalls a striking example in which a patient had been subjected to operation forty-two times in as many years of life, some of surgical necessity, but mostly to influence a psychopathic state. The results of such procedures were naturally entirely futile. The same may be said of treatment by means of endocrine products: if cases are definitely, or even suspiciously, in the group of glandular dysfunction, they are automatically removed from the category of diseases under discussion.

The question arises, if it is considered that the psychopath is so constituted by the inheritance, can any change be wrought in the individual so afflicted? If there is an inherent lack, structural or otherwise, of certain balancing, controlling or inhibiting mechanisms, can these be restored? Leaving this for later discussion, it is necessary to give attention to the practical issue that these patients at some time in their lives are likely to require aid and care from medical or social agencies. One great group includes those with emotional instability who react in an abnormal way to episodes that in the normal individual are adequately handled. These are the psychotic or hysterical attacks, mild depressions, chronic invalidism, etc. The management of these transitory disturbances call for the same general principles of treatment as the frank psychoses or psychoneuroses occurring in individuals not on a psychopathic basis. These attacks invariably necessitate the admission of the person so afflicted to a hospital or some type of institution. They usually respond quickly, as far as the immediate condition is concerned, to symptomatic treatment, except in the case of chronic invalids. The emotional upsets ordinarily resolve themselves rapidly by the mere fact that the patient is removed from the environmental influences that were operating against them, and the need for adjustment is no longer necessary. The psychotic symptoms disappear readily under the influence of rest and a regulated hospital regimen. In other words, the instigating factors are removed and the restoration of reasonably good reactions takes place. There then remains the duty of giving the patient a proper convalescence and directing our efforts to modifying the fundamental psychopathic state to insure against recurrences.

It is well to point out in this connection the wholesome effect of implanting in the mind of the patient vivid memories of the episodic reaction and the experiences in the hospital. There should be brought to the attention of the patient the dis-

turbing effect of the illness in the patient's career, and in the well-being of the family. The distressing details of the entire affair can be frankly reviewed with the patient in a manner that does not allow sentiment to minimize the emphasis that should be placed upon the harm that has been done. The registration firmly in consciousness of these facts acts as a deterrent to future attacks of like nature and stimulates the patient to co-operate in methods devised to prevent their recurrence.

The patient's residency in the institution should not cease with the disappearance of symptoms, but a period of regulated control, consisting of several months, is the ideal to aid in the strengthening of the personality structures. The patient should have in the hospital not only a well regulated daily life, but those things that have a reëducational value. The program should not allow the patient to drift into a state of institutionalism, but there should be provided some occupational work, as in trade schools, supervised recreational activity, systematic exercises, and in some instances development along cultural lines. It is helpful also to have social contacts in the hospital that will aid the patient in developing an inspired mechanism of adjustment so that he will be better able to live the group life that is necessary in all civilized communities. The psychopath, even more than the ordinary psychotic patient, requires the benefits to be derived from well organized after-care. This may be done by the individual's physician or through established agencies for this purpose.

The treatment of the group who have criminal tendencies involves so many things in sociology, penology, and psychiatry that it will not be discussed in detail here. It would be better for society if those who are recognized as habitual criminals could be permanently segregated. We see the need today of study of deviates during adolescence in schools, and more use of child-guidance clinics in order that criminal tendencies may be avoided. It is true, of course, that many psychopaths live within the bounds of the regulations of society, if they meet with fortuitous circumstances; but there are others who under the best of conditions, and after all that scientific medicine can do for them, never attain proper balance.

The fundamental condition of psychopathy is worthy of serious consideration; at least a sincere attempt should be made to develop adequate treatment. Birnbaum in Berlin has pointed out the possibilities of social-educative methods: it may be possible to exert a spiritual leadership to overcome moral and emotional immaturity. The psychopath, however, is often so self-confident and egotistical that there is reluctance on his part to accept medical advice unless some episodic disturbances noted above occur. The psychopath is prone to look upon the difficulties in life as originating from circumstances about him rather than from something inherent in his own make-up. There are some who will be benefited by psychoanalysis; all will be greatly helped by a proper physician-patient relationship. It would be ideal if every

psychopath could be under the continuous guidance and direction of an understanding physician just the same as when other chronic illnesses are managed. The patient with tuberculosis keeps in touch with the physician after the arrest of the disease, to obtain guidance and to promote proper welfare; and by the same method the psychopath could be helped to better adjustment.

The tendency to emotional instability should be met by the best scientific psychiatric procedures to aid and direct the individual in the task of modifying the mental and emotional pattern. Not all patients will be repulsed by a frank discussion of their defects, but on the contrary a clear recognition of their presence makes them better able to put forth an intelligent personal effort.

The possibility of habit reaction is very great in the constitutional psychopath. The occurrence of one psychotic or serious emotional upset paves the way for others of like nature, because the patient often unconsciously discovers that this furnishes the easiest method of escape from difficulties. It is, therefore, of the utmost importance to mold and modify the personality make-up as early in life as these deviations from normal can be recognized. Here again, the physician-patient relationship or psychiatric guidance is of the utmost value.

There are many practical points to be considered in the sphere of family relationship, and proper placement of the individual in the social and industrial life. We cannot in every instance change the environmental factors operating in a given case, so our methods should endeavor to promote those things that will make the individual adequate to meet the situation. Nevertheless we must recognize that some changes in the environment are often necessary to the end that a suitable occupation may be found. The psychopathic individual who is subjected to strains and stresses dependent upon an occupation entirely out of proportion to their capacity is naturally placed at a disadvantage and faces the danger of nervous irritability, mental exhaustion, depressions, and other complications ensuing. The fitting of the occupation to the person may in many instances make a happy solution of an otherwise complicated problem.

The period of adolescence, and up until some of the physiological epochs in life have been passed, may prove to be the most serious time for the constitutional psychopath. It is fortunate that with the attainment of greater maturity the powers of adjustment correspondingly increase.

The group of patients who develop addictions such as drugs and alcohol, because of the inherent fundamental psychopathic weakness, tax our best efforts at management, control or cure. A long period of enforced abstinence in an institution is probably the best treatment for all of these patients, and particularly the psychopath. The outlook at best is not very promising, and treatment may only serve to carry the patient through short periods of temperate living.

In conclusion, it is only fair to say that methods of treatment of constitutional psychopathic states

are still inadequate and in the formative stage. The knowledge we possess falls short of the need that this large division of psychiatry requires. It behooves us to apply earnestly the facts at our command, and by research push forward our therapeutic procedures into fields of greater and more fruitful service.

Workmen's Compensation Acts—Compensability of Typhoid Fever.—The claimant's husband, employed by a drug company, died from typhoid fever contracted during an outbreak in Ogden, Utah. She sought compensation under the Workmen's Compensation Act, claiming that he contracted the disease in the course of his employment. Two physicians who investigated the outbreak testified before the industrial commission, on behalf of the claimant, that in their opinion a certain typhoid carrier, and not the city water supply, caused it. Since that carrier often went into the drug store in which the decedent was employed, these witnesses believed that the decedent contracted typhoid fever from him. The employer introduced in evidence a report of the State Board of Health, purporting to show that the outbreak was due, not to a typhoid carrier, but to a contaminated city water supply. The industrial commission held that the decedent contracted typhoid fever from drinking water, and because he drank the same water at home and at his place of employment, it denied compensation. The claimant appealed to the Supreme Court of Utah. Findings made by the industrial commission on conflicting evidence, said the Supreme Court, are binding on the court. Consequently, under the evidence presented, the court could not disturb the commission's findings. Even if it were shown that the decedent had contracted typhoid fever in the course of his employment, the court doubted whether the claimant would be entitled to compensation. The Utah Workmen's Compensation Act provides compensation only for "personal injury by accident," arising out of and in the course of employment. It provides that the words "personal injury by accident" shall not include a disease, except as it results from an injury. This language, said the court, would seem to indicate a legislative intent that a disease, to be compensable, must be brought about by some injury other than the mere conveying of disease germs to the employee. The finding of the commission denying compensation to the claimant was affirmed.—*Chase v. Industrial Commission (Utah)*, 17 P. (2d) 205.—*Journal of the American Medical Association*.

Pain.—Waterston presents the sensory response to a needle prick of the skin, arteries, veins, muscles, fibrous tissues, periosteum and bone. The walls of veins are much less sensitive to mechanical stimulation, and the pain apparatus in them is evidently much slighter than that of arteries. Muscles form an interesting comparison with these other tissues, for while there is no doubt that muscles have a pain apparatus, it is usually excited by a special form of stimulus, *i. e.*, spasmodic contraction as in cramp, or by contraction with impaired blood supply. Pain is usually regarded as a protective mechanism and as being primitive in character, but it is a more highly specialized sense than would at first appear. Under the tactile epithelium of the body surface is a layer of tissue, the corium, furnished with nerves responsive to a wide range of stimuli—in other words, protective against many injurious agencies. The tissues lying deeper still have also a pain apparatus, which, in the case of arteries, responds to mechanical injury, but in muscle is responsive rather to harmful conditions originating in the muscle than to mechanical injury. Pain is not a sensation produced by nerves or other forms of sensation, but has its own apparatus, its own nerves, and probably its own receptors.—*London Lancet*.

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EDITORIALS*

DOES CALIFORNIA NEED A BASIC SCIENCE (QUALIFYING CERTIFICATE) LAW?

Basic Science Legislation Is of Recent Origin.—

In 1925, after a somewhat unfortunate experience with low standard healing art licensure groups, the State of Connecticut passed the first of what are now called basic science laws. Minnesota, Nebraska, Washington, Wisconsin, and a number of other states soon adopted similar legislation. In California a special committee, which came into existence through a resolution passed by the California Medical Association Council on September 28, 1929, suggested in several of its reports dealing with a proposed basic science law that a better name for such a law might be to call it a "Qualifying Certificate Act."[†]

* * *

The Object and Scope of Basic Science (Qualifying Certificate) Laws.—The object of basic science or qualifying certificate laws is to make certain that every person desiring to be licensed by a State shall possess, in addition to purely pro-

* Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comments column, which follows.

[†] References to reports made by this committee, and published in CALIFORNIA AND WESTERN MEDICINE, are printed on Page 211.

fessional qualifications, certain other basic education before being entitled to take an examination leading to the practice of any form of healing art. Such a law is made applicable to all healing art schools and examining boards, both of the regular or nonsectarian profession, and of cultist or sectarian practice.

The so-called basic education or qualifications include, usually, four to eight primary or fundamental subjects, such as anatomy, physiology, chemistry, biology, hygiene, bacteriology, pathology, and diagnosis. Our California committee several years ago, after much discussion, came to the conclusion that such a basic science or qualifying certificate law would fully serve its purpose, and, if proposed on an initiative ballot, would not only meet with less opposition, but be more appealing to the electorate, if there was practically no mention made of subjects such as bacteriology, pathology, and diagnosis, the inclusion of which would permit low standard groups, through specious argument, to becloud the issues.

The subjects which were tentatively agreed upon by the California committee were: English, anatomy, physiology, chemistry, and biology. The insertion of English was deemed proper on the ground that persons seeking licenses as practitioners in California should be able to speak the language of the citizens with at least fair facility and correctness. It was felt that lay opinion at large would support the committee's viewpoint that the other four subjects (anatomy, physiology, chemistry, and biology) while of primary importance for basic education in all schools of the healing art, could also be claimed to be essentially nonpartisan to any group and, therefore, less controversial.

The amount of education demanded in each of the said five subjects would be of the standard laid down for graduates of four-year high school courses who seek admission to courses in liberal arts colleges. There would be no stipulation as to when and where the education in these subjects had been acquired, but every person submitting such a basic science or qualifying certificate to a healing art board would be required to be at least twenty-one years of age. That would prevent every such board from granting a license to practice to any applicant for licensure who was under the age of twenty-one.

* * *

Complexion of the Examining Board.—Since in matters of this nature members of sectarian and cultist groups are prone to raise a hue and cry with a slogan such as "domination by the medical trust," it is desirable, and perhaps necessary, that a basic science or qualifying certificate board should be composed of members having no places on medical faculties. The California Medical Association committee suggested that a board of five members be appointed by the Governor of California, one each from the following institutions: the University of California, Stanford University, Santa Clara University, University of Southern California, and the California Institute of Technology. The presidents or executive heads of the institutions named would each

submit the names of two or three faculty associates, the Governor to choose one person from each group of nominees to represent the respective institution. It was felt that a board of examiners so constituted would be representative of broad educational and nonpartisan backgrounds, and also be *sans peur et sans reproche*.

* * *

Such a Basic Science or Qualifying Certificate Law Could Be of Real Service.—It is the belief of many members of the California Medical Association that such a basic science or qualifying certificate law could be of real service to the citizens of California, in that it would make it obligatory that every practitioner of the healing art, no matter to what school he might belong, should have certain fundamental education. Several years ago, at Los Angeles, when this subject was being studied by representatives of the medical, dental and pharmaceutical professions, it was found that there was considerable unanimity among those present on the desirability for such legislation. This year 1934 will witness State elections at which proposed initiative laws may be considered by the electorate. It is suggested that component county medical society committees on legislation and public policy place this subject of a basic science or qualifying certificate law (the latter term preferred) on the list of topics for further study and report. Surely, it is well worth the time of all medical men to consider such a measure.

MICHIGAN'S CONTRIBUTION TO THE "COSTS OF MEDICAL CARE"

How the Michigan Survey was Made.—The Michigan State Medical Society, through a special committee with Dr. Frederick C. Warnshuis, Speaker of the American Medical Association House of Delegates, as its chairman, last year brought out an elaborate report of some 700 pages, dealing with the costs of illness in Michigan. While the actual expense of making the survey and completing the report amounted to more than \$11,000, we were informed some months ago by a representative of the Rosenwald Foundation that if many of the studies had not been gratuitously made by research students and other investigators in the University of Michigan, and by co-workers in other state agencies, the expense of producing this valuable monograph on illness and its costs, as applied to Michigan, would have amounted to more than \$75,000. Mention is made of this fact because many physicians fail to appreciate that the collection, compilation, and the study of factual information bearing on illness, can only be done through expert aid. Sometimes, as in the case of Michigan, much of the necessary assistance may be secured at little cost; but if the clerical and supervisory work incident to the gathering of such data must be paid for at current rates, then the expense of making such a survey may mean the expenditure of considerably greater sums of money.

Factual information relating to illness and its costs is only valuable when it is accurate; and even when so collected and compiled, such data may become the subject of much difference of opinion. Witness, for example, what happened

when the press published the valuable, and what might be called monumental contribution, in the form of many publications, compiled and printed at an expense of more than \$500,000 by the National Committee on Costs of Medical Care, of which a fellow Californian, Dr. Ray Lyman Wilbur of Stanford, was chairman.

* * *

California Has Been Making Similar Studies.—In California the Council, acting under authorization by the House of Delegates, for itself and through the California Medical Association Committee on Public Relations, has also been making an effort to collect factual information that might aid in solving some of the economic and other problems related to illness and medical practice. If, therefore, solutions to all such problems in our own State have not yet been arrived at, we should not be discouraged. It is only necessary to survey the many investigations which have been and are still being carried on in different portions of the United States, and to note how widely the tentative solutions differ, to make one appreciate how involved are these matters that have to do with illness in its numerous and various phases.

* * *

Some Interesting Michigan Figures.—Michigan has a population of 4,842,325 (practically one million less than California—5,677,251), and has virtually 1,080,000 families, and 76,000 citizens not members of Michigan families. The report of the committee stated that the average family income was about \$2,600, or \$648 per individual. It is interesting to note that less than 10 per cent of the population received 35 per cent of the public's total annual income, and that the remaining 65 per cent of the public's annual income had to care for the remaining 92 per cent of Michigan's citizens. In Michigan there is one physician to every 888 persons. The average gross income of the Michigan physicians was \$6,590, and the average net income was \$3,876. The report states that approximately two thousand physicians (or 43 per cent of the physicians in practice) had net incomes of \$2,500 or less. These are certainly very interesting figures, and when viewed in conjunction with other facts, make evident the difficulties which are met, in attempts to devise ways and means for efficient care to citizens in all walks of life, and which would at the same time make it possible for physicians to have adequate incomes commensurate to their own needs and responsibilities.

Our Michigan colleagues are to be congratulated on their excellent work as evidenced by the results noted in this survey monograph, printed, unfortunately, in only a limited edition. Copies should be purchased, therefore, not only by the State University, Lane and Barlow libraries, but have a place in many others; for the report is full of suggestive value to all physicians who seek to inform themselves on the medical economics of their own and other states. County medical societies, making studies of local problems, might well obtain a copy for use by their proper committees, and for other members who are interested.*

* The office address of the Michigan State Medical Society is 148 Monroe Avenue, Grand Rapids, Michigan.

BY WHAT BOARD SHALL NURSES BE CERTIFIED?

How Registered Nurses (R. N.'s) Came to Be in California.—In June, 1913, the California Legislature passed a law which provided that a nurse desiring to be known as a "registered nurse" (R. N.) could be so certified through a newly created department of the California State Board of Health which would be known as the Bureau of Nursing. That arrangement for an examining bureau, with a director in charge, was submitted by the group of nurses and others who had sponsored the new law. The responsibility created by the Legislature of 1913 was accepted by the Health Board members, who have striven to carry on the certification work along those lines which would best promote the rights of all concerned.

The various major interests having to do with training and certification of nurses may be said to include: first, the nurses; second, the doctors under whom the nurses work; third, the hospitals and hospital executives (who play so prominent a part in both the training schools and in hospitalization work); and fourth, that portion of the lay public who, when sickness or injury visits them, finds it necessary or desirable to have nursing aid.

* * *

Recent Proposals for a New Law and the Parties at Interest.—Recently, some of the leaders of the nursing profession have felt the urge to have a separate board of nurse examiners which, if it came into existence through an act of the next Legislature, would probably find a place among the various boards that collectively make up that division of the state government known as "The Department of Professional and Vocational Standards."

As a result of the discussions which have been taking place, the California State Board of Health at its January meeting in Los Angeles, and again at its February meeting in San Francisco, placed on its dockets of business, informal hearings at which appeared representatives of some of the parties most concerned.

The California nurses who have been certified as R. N.'s may be divided into the following three groups: registered nurses (represented by their organized state and district organizations); public health nurses; and training school nurses. The hospital executives likewise are deeply interested, because their institutions supply what might be called the college buildings and equipment and personnel by means of which the training schools for nurses exist. In addition, members of the medical profession, who have played such a leading part in both the theoretical and practical teaching of nurses, in training schools and also hospitals (and to whom graduate and practical nurses must turn for opportunities to do the nursing work incident to the care of the sick and injured) may also be said to be parties having a real interest in the establishment of any new registration system for nurses in California.

As a result of the exchange of viewpoints at the two hearings referred to, it was suggested that in the near future the hospitals, through their executives, and the various nursing groups, through their representatives, should meet to fur-

ther discuss the different plans in the forming, in the hope that some method might be worked out that would be mutually agreeable and which, at the same time, would best subserve the joint interests of nurses, hospitals, physicians, and patients.

SPECIAL RAILROAD RATE TO RIVERSIDE CONVENTION

Attention is called to a communication, printed in this issue, regarding special round-trip rates on the various railroad lines of California interested in this year's California Medical Association annual session, to be held at Riverside from April 30 to May 4. (See page 214.)

These intrastate tickets will be on sale, on what is known as the "Identification Plan," from April 26 to May 3, inclusive, and they will have a return limit good up to May 7, 1934.

In order, however, to secure these special rates, it is necessary for each member to present to the ticket agent an official "identification certificate." These will be supplied to the component county societies through the Association Secretary. Members of county societies who contemplate availing themselves of the special rate, therefore, will confer a favor by reporting that fact to either their society secretary or to the Association Secretary direct, so that the central office of the California Medical Association may send to each county society an adequate number of the official identification blanks.

WONDERFUL, IF TRUE—NEW STATE RULES CONCERNING HEALTH INSURANCE

Health and Insurance Associations in California Must Conform to Long-Needed Provisions.—After the copy for the March CALIFORNIA AND WESTERN MEDICINE had been prepared for the press, the editor saw in the Los Angeles Times of February 22 a San Francisco dispatch which was given a first-page, first-column position.

It dealt with a notice, sent out on February 21 by California State Insurance Commissioner Mitchell, in which he informed every California health and accident insurance company or association that hereafter health and accident insurance policies could not be sold unless such companies or associations possessed financial resources adequate to meet the obligations of standard health and accident insurance policies. The dispatch stated that the Alameda County authorities and grand jury, acting in conjunction with the California Board of Medical Examiners, had uncovered such deplorable conditions that an appeal had been made to Governor James Rolph to support the effort "to drive all fraudulent health and accident insurance companies out of California." The order by State Insurance Commissioner Mitchell followed.*

* The officers of the California Medical Association have long been interested in this problem, and in the past have called the attention of different departments of the state government to the harm done to many citizens through the misrepresentations of some of the non-standard so-called health associations. Subsequent to the first of several feature articles in the San Francisco Chronicle, was printed an interview with Dr. T. Henshaw Kelly, chairman of the California Medical Association Council, in which the attitude of the California Medical Association was outlined. This article came to the editor's desk after the page forms of the March issue were well in hand. Space was made for it in the Miscellany department. (See page 215.)

Members of the California Medical Association in all portions of the State can render aid in this work by sending the names, literature and other information concerning such health insurance and accident companies to Dr. C. B. Pinkham, Secretary, California State Board of Medical Examiners, Room 512, 450 McAllister Street, San Francisco.

The interesting news item follows:

EDICT GIVEN ON RACKET

Fake Insurance Drive Begun

All Health and Accident Groups Must Conform to New State Regulations

Three Qualifications Made—Bona Fide Organizations Held Above Reproach

San Francisco, Feb. 21. (Exclusive.)—Notice went forward today from the office of State Insurance Commissioner Mitchell to all organizations in the State dealing in health and accident insurance to conform to regulations or quit business.

Approximately 150 companies will receive the notices, including those operating legitimately and within the law. The purpose is to drive out of business those organizations exposed within the last week as mulcting gullible certificate purchasers, and marks the latest step in a state-wide effort to stop racketeering in this heretofore profitable source of income for promoters who have no honest services to render.

Commissioner Mitchell's notice was addressed to "all hospital or medical service associations operating in California," and is backed by a ruling of the Attorney-General.

Three Qualifications

To continue in business, three qualifications will have to be met, namely:

Organize as regular stock companies with a paid-up capital of at least \$100,000.

Organize as mutual life and accident associations on the assessment plan in accordance with sections of the Civil Code which call for one thousand members or more at \$25 each to receive a certificate from the insurance commissioner.

Organize a bona fide fraternal benefit association under acts calling for a ritual and other fraternal society ap-purtenances.

Existing bona fide organizations, it is explained, are above reproach in this sweeping order, but they are included for moral salutary purposes for the ultimate good of all. Organizations now within the law and rendering legitimate and honest services either will have to make a purely routine showing or make some minor changes to conform to regulations as announced. The "fly-by-nights" will be unable to meet financial requirements.

Time Allowed

A "reasonable" length of time will be allowed for qualifications under the new pronouncement, and court action is promised against violators.

As an example of the assertedly fraudulent companies, the State Medical Board supplied District Attorney Warren of Alameda County with information that a group headed by Harry Kramer had two thousand "policyholders" on its lists and \$140 in the bank. The showing was sufficient for the Alameda County grand jury to vote indictments against Kramer and eighteen others.

Commissioner Mitchell's order followed an appeal to Governor Rolph by Joseph Laney, foreman of the Alameda County grand jury, to drive all fraudulent health and accident insurance companies out of California.

EDITORIAL COMMENT*

LINGUISTIC PITFALLS IN CLINICAL LOGIC

While the medical profession has taken steps to guard the general public against "misbranded" nostrums and "misleading" therapeutic slogans, little attention has been given to the insidious metaphors of biological science, which often condition clinical logic. One of the dialectic hazards of current interest is the therapeutic slogan, "bacteriophage," unfortunately substituted for the original Twort terminology, "transmissible bacterial lysin." This slogan raised the Twort colloid to commercial value. Identically the same laboratory product offered under the less spectacular title, "phage-lysed bacterial vaccine," has had little commercial appeal.

The linguistic efficiency of this "bacteria-eating" metaphor has also impressed nonclinical workers. Its use as a logical instrument to conserve or increase soil fertility has been seriously advocated, as well as its predicted value as a food preservative. Its dialectic effectiveness in the purification of municipal water supplies has been tested in India, where the subsequent subsidence of a local cholera epidemic amply verified its presumed value.

While industrial chemists have not doubted the efficiency of hygienic slogans in clinical medicine, they have been reluctant to adopt this microbivorous colloid as a technical instrument without convincing experimental evidence of its presumptive function. Studies of this colloidal antiseptic, therefore, have been made by several industrial engineers, particularly by Prof. Paul J. Beard¹ of the department of sanitary engineering, Stanford University.

Doctor Beard attempted to verify its advertised efficiency in municipal water purification and its alleged rôle in certain methods of sewage disposal. To do this, he constructed miniature sedimentation tanks and sludge-conditioning chambers, and made parallel studies of specific bacterial populations in the presence and absence of homologous Twort colloid.

In the presence of clay, for example, or of plant or animal refuse, the Stanford engineer found that the Twort colloid is absorbed onto the formed particles, and never comes into effective contact with the accompanying bacteria. By proper elution methods, the "phage" can be recovered almost quantitatively from these particles. The exposed bacteria are in no way injured. They are neither increased nor decreased in their rate of multiplication. Nor are they transformed into the usual phage-resistant strains which often follow nonlytic clinical exposure.

* This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

¹ Beard, P. J.: J. Infect. Dis., 52:420, 1933.

These data are in line with the well-known test-tube evidence of "phage" inhibition in the presence of leukocytes, erythrocytes, tissue cells, and biological colloids. They also suggest that phagelysis in the gastro-intestinal canal is perhaps illusionary.

In waters free from organic matter, little or no multiplication of the added gastro-intestinal bacteria was noted under the temperature conditions of Professor Beard's experiments. On the addition of homologous Twort colloid, negligible increases were noted in "phage" concentration. This never reached a sufficiently high titer to injure the accompanying bacteria. This finding is in accord with the well-confirmed fact that "phage" proliferation is a by-product of bacterial multiplication. Under ordinary test-tube conditions, no "lysis" is expected, except as a result of a marked preliminary increase in homologous bacterial flora.

Stanford University.

W. H. MANWARING,
Palo Alto.

THE USE OF FATTY ACIDS IN THERAPY

Apart from the classical use of fatty acids and their derivatives as physical or chemical carriers of more potent agents, as in the case of ointments, iodized oils and vitamin-containing oils, the fatty acids themselves are more recently coming into increasing use in the treatment of a variety of conditions. Specific fatty acids, or their simple chemical derivatives, have been recognized variously to possess high bactericidal, tonic, sclerosing, cholagogue, peculiar nutritional, vitamin-sparing and toxin-combining capacities, and to be intimately connected with disturbances of metabolism evidenced by skin eruptions or endocrine dysfunction.

The cyclopentenyl ring-containing acids of the chaulmoogra group of oils were found by Walker and Sweeney¹ to be effective in high dilution in preventing the growth of *Mycobacteria*, and the statement in "New and Nonofficial Remedies"² that "it is to this property that the beneficial effects of chaulmoogra oil derivatives in leprosy are probably due," has received recent substantiation.³ The tonic effect of such unsaturate fatty acids as are present in whole cod-liver oil, aside from its vitamin content, has again lately been considered.⁴ Na morrhuate, the soap of cod-liver oil fatty acids, has been employed in obliterating varicose veins.⁵ The study of the vitamin-sparing action, and peculiar nutritional properties of certain fatty acids under investigation by Evans and Lepkovsky,⁶ has added value in that the use of relatively pure fatty acids and glycerids in this work was made possible by elaborate chemical

techniques. The long-recognized cholagogue action of fatty acids may be of more importance in normal metabolism than has been appreciated, through the facilitating of vitamin absorption by the mechanism proposed by Schmidt and Greaves.⁷ The toxin-combining power of Na ricinoleate, found to be highest among the soaps, has led to its use by Burger⁸ in treatment of toxic irritation of the colon caused by bacterial invasion. The success of treatment with unsaturate fatty acids in infantile eczema apparently depends on the concomitant restoration of the iodine number of blood fatty acids to normal values.⁹ The number of unsaturate vegetable oils, used traditionally in the folk medicine of India, Africa and South America for skin affections, is notable. Finally, the short note on the relationship of unsaturate fatty acids to goiter production in experimental animals, reported by McCarrison in India,¹⁰ challenges further research on the influence of these compounds on the endocrines.

Fats are primarily nutrients, and it is not illogical to assume a normal path of metabolism for most fatty acid derivatives. Since certain side actions appear with some fatty acids, however, it is necessary with these medicaments, as with all others,¹¹ to subject each to a complete pharmacological study before their extended use in human therapy is attempted. If the careful studies of Frazier¹² and of Read¹³ had been carried out before proprietary brands of Na chaulmoograte or hydnocarpate were exploited, it is doubtful if their uncontrolled use would have led so quickly to their abandonment. Hemolysis, severe anemia, and nephritis may follow the use of any highly unsaturate oil in quantity; it should be remembered that oxydimethylthioleric acid is a most powerful hemolysin,¹⁴ and that this compound is not distantly related to more common unsaturate fatty acids. A pharmacological evaluation of each new purified product should be made before its clinical trial.

Pharmacological Laboratory,
University of California Medical School.

GEORGE A. EMERSON,
San Francisco.

EMETIN IN AMEBIASIS

Current interest in amebiasis (incorrectly referred to as amebic dysentery, which is but one phase of the symptom complex) has prompted Chicago and other physicians throughout the United States to comment on the clinical handling of patients with *E. histolytica* infection. Regarding therapy, a recent contributor has recom-

¹ Walker, E. L., and Sweeney, M. A.: J. Inf. Dis., 26:238, 1920.

² New and Nonofficial Remedies: P. 134, 1933.

³ Emerson, G. A., Anderson, H. H., and Leake, C. D.: Proc. Soc. Exper. Biol. and Med., 30:150, 1932; 31:18, 272, 1933.

⁴ Maignon, F.: Bull. Acad. Vet de France, 5:390, 1932.

⁵ Tunick, I. S., and Nach, R.: Ann. Surgery, 95:734, 1932.

⁶ Evans, H. M., and Lepkovsky, Samuel: J. B. C., 92:615, 1931; 96:165, 179, 1932.

⁷ Schmidt, C. L. A., and Greaves, D.: Proc. Soc. Exper. Biol. and Med., in press.

⁸ Burger, G. N.: J. Lab. Clin. Med., 19:234, 1933.

⁹ Hansen, A. E.: Proc. Soc. Exper. Biol. and Med., 31:160, 1933.

¹⁰ McCarrison, R.: Ind. J. Med. Res., 21:179, 1933.

¹¹ Leake, C. D.: J. A. M. A., 93:1632, 1929.

¹² Frazier, C. N.: Proc. Soc. Exper. Biol. and Med., 29:44, 1931.

¹³ Read, B. E.: Internat. J. Leprosy, 1:293, 1933.

¹⁴ Burkhardt, L.: Arch. Exp. Path. Pharm., 63:107, 1910.

mended the intravenous use of emetin in one-third grain doses twice weekly. He maintains that this dosage "may be continued for months, with no cumulative action." He further states that the hearts of amebiasis patients thus treated have been found to be undamaged in every case.¹

While such may be the experience of this practitioner, it certainly does not follow that emetin may be given safely by the intravenous route without causing cardiac muscle damage in susceptible individuals. It has been demonstrated, both experimentally and clinically, that the drug is many times more toxic when given by vein than when administered by mouth, subcutaneously or intramuscularly.² Moreover, there is no advantage in absorption, since even oral administration results in accumulation of the drug in the body.³ The subcutaneous route is the method of choice, however, for emetin may cause disturbed gastro-enteric function when given by mouth. On injection into muscle, abscesses may result. The excretion of the drug is extremely slow. It is apparently fixed in muscle tissue, particularly cardiac, and on this account the toxic range for repeated doses is the same as for a single administration.

In fact, it is James's opinion that patients who have been given emetin are not good surgical risks because of possible myocardial damage resulting from the drug.⁴ With this we agree, since we have both pathologic and cardiographic evidence to support this contention.⁵ Clinically, one may detect impending toxicity by watching the pulse rate and blood pressure. An increase in rate and a lowering of pressure indicate the beginning of cardiac dysfunction. Abnormal cardiographic tracings are obtained only in patients who have severe myocardial involvement. Certainly since less toxic, more effective amebicides are available, one should not embarrass an infected individual by using such a potentially dangerous drug except in those cases exhibiting impaired hepatic function or hepatic abscess.

Department of Pharmacology,
University of California.

HAMILTON H. ANDERSON,
San Francisco.

¹ Barrow, J. V.: Amebic Dysentery, Calif. and West. Med., 40:60 (Jan.), 1934.

² Fischl, V., and Schlossberger, H.: Handbook of Chemotherapy, Part I, p. 268, 1933, H. G. Roebuck and Son, Baltimore.

³ Anderson, H. H., and Leake, C. D.: Toxicity of Emetin and Related Compounds for Rabbits and Cats, Amer. Jour. Trop. Med., 10:249 (July), 1930.

⁴ James, W. M.: Personal communication.

⁵ Rinehart, J. F., and Anderson, H. H.: Effect of Emetin on Cardiac Muscle, Arch. Path., 11:546 (April), 1931; Anderson, H. H., and Reed, A. C.: Untoward Effects of Antiamoebic Drugs, Amer. Jour. Trop. Med., in press.

Must the Laboratory Technician Have a College Education?—Under this caption, W. H. Kellogg, M. D., Chief of the Bureau of Laboratories of the California State Board of Health, recently expressed himself as follows:

One hears this question frequently these days, and with the expanding field and the multiplication of laboratories it is an important one.

Some laboratory directors express the opinion that such preparation is not necessary and they go so far as to say that they prefer a technician trained by

themselves over one fresh from college, filled with theory, but with little practical experience.

It must be admitted that there are many highly competent technicians who have learned all they know in the school of experience. It is doubtless a matter of mental equipment and such natural characteristics as resourcefulness, industry, and an interest beyond that of the pay envelope and the hour of release from the day's work. But there are also many individuals who are lacking in the attributes necessary for successful self-education who nevertheless do reach a satisfactory level of performance through the guided and directed study of college courses. It seems clear that neither the contention that college training is necessary or that college training is not necessary applies to all cases or could be adopted as a hard and fast rule.

The State Board of Health realizes the justice of providing for the recognition of merit in its certification of technicians whether they have entered the field through the college or through practical experience only. Credits toward the certificate, therefore, are made up of both knowledge and experience, and college work may be substituted in whole or in part for experience. Naturally, the knowledge obtained by experience is not in direct proportion to the time spent, but rather does it depend upon contact with competent associates and supervisors. That a college degree, particularly one obtained with courses selected for their value in laboratory work, is of distinct advantage is shown by a study of the results of the last examination for technicians. Even the person who is capable under good supervision of becoming in course of time a qualified technician is better for the college discipline, and will reach the goal just as soon.

In the examination of May, 1933, eighty-six persons appeared. The eighty-six individuals took 144 examinations, there being four separate examinations for certificates in four different subjects, some persons trying for more than one certificate. A passing grade will yield either a senior or a junior certificate according to the total credits for knowledge and experience. Considering each examination for a certificate as that of one individual, we have 144 persons to classify in a study of the value of college training. Of these, forty-two were college graduates, but did not take special laboratory courses particularly designed for the training of technicians; fifty-eight were not only college graduates, but they had the aforementioned special courses; thirty-nine had only practical experience and no college work; and five were not college graduates, but they had taken courses in certain eastern schools for technicians.

In the first group, college graduates, 31 per cent secured senior certificates, 36 per cent junior certificates, and 33 per cent failed.

In the group represented by college graduates who have had special courses or a major in the subject directly related to the examination, 53.5 per cent secured senior certificates, 38 per cent junior, and only 8.5 per cent failed to secure either.

In the group with no college training, totaling thirty-nine, 18 per cent secured senior certificates, 20 per cent junior, and 61 per cent failed.

In the group having only a course in a commercial school for technicians there were only five, which is rather a small number to express in percentage. However, none of these five secured the senior certificate, one secured a junior, and the rest failed, which would give us 20 per cent securing juniors, and 80 per cent of failures.

These figures show rather definitely that the best preparation for anyone who realizes early enough in life that he desires a career as a laboratory technician, is a college course.—*Weekly Bulletin, California Department of Public Health.*

The education of most people ends upon graduation; that of the physician means a lifetime of incessant study (Marx).

STATE MEDICAL ASSOCIATIONS

This department contains official notices, reports of county society proceedings and other information having to do with the state associations and their component county societies. The copy for the department is edited by the state association secretaries, to whom communications for this department should be sent. Rosters of state association officers and committees and of component county societies and affiliated organizations, are printed in the directories noted under Miscellany, on the front cover index.

CALIFORNIA MEDICAL ASSOCIATION

GEORGE G. REINLE President
CLARENCE G. TOLAND.....President-Elect
EMMA W. POPE.....Secretary-Treasurer

OFFICIAL NOTICES

Railroad Transportation to Riverside—Annual Session (April 30 to May 3, 1934).—Buy through ticket to Riverside on *Sunset Limited*, Sunday, April 29. If twenty-five or more passengers on the Sunday night *Limited* hold Riverside tickets, special electric trains to Riverside will connect at the Southern Pacific depot in Los Angeles, to take passengers direct to Riverside. The *Sunset Limited* leaves San Francisco at 6:45 p. m. and reaches Los Angeles at 8:15 a. m.

The Lark and Padre arrive too late to permit attendance at the opening of the Monday general session.

* * *

Reduced Rates.—Buy your ticket to Riverside, via Los Angeles, on *Sunset Limited*. Secure identification certificate from the State office, which will entitle you to material reduction in round-trip ticket if used when ticket is purchased on or after April 26.*

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Under "Correspondence," page 214, appears a letter from the Southern Pacific Company offering a material reduction on railroad rates to the Riverside convention on a special round-trip convention fare. Under that plan, tickets from San Francisco may be purchased for \$13.60—\$7.50 less than the regular round-trip rate.

Secure your certification sheet from the State office before purchasing a ticket.

* * *

Microscopic Pathology and the Radiology Diagnostic Conferences.—The same privilege will be extended to members going to Riverside on the *Sunset Limited*, Saturday, April 28, as to those going by the same train on Sunday, April 29.

* * *

Hotel Rates for Annual Session

April 30 to May 3, 1934

MISSION INN, CONVENTION HEADQUARTERS

American Plan

Single rooms without bath, \$6 per day.
Single room with bath, \$8 per day.
Double room without bath, \$11 per day.
Double room with bath, \$13 per day.

✓ ✓ ✓

Other Riverside Hotels

European Plan

Reynolds Hotel—One Hundred Rooms

Single rooms without bath, \$1.50.
Single rooms with bath, \$2.50.
Double rooms without bath, \$2.50.
Double rooms with bath, \$3.50.

* **Editor's Note.**—See also editorial note on page 196, in regard to conditions under which such reduced fare is granted.

Tetley Hotel—One Hundred Rooms

Single rooms without bath, \$1 and \$1.50.
Single rooms with bath, \$1.50 and \$2.
Double rooms without bath, \$1.50 and \$2.
Double rooms with bath, \$2 and \$3.

Plaza Hotel*—Forty-Two Rooms

Single rooms without bath, \$1.
Single rooms with bath, \$2 and \$2.50.
Double rooms without bath, \$1.50.
Double rooms with bath, \$3.

Potter Hotel—Twenty-Six Rooms

Single rooms with bath, \$2 and \$2.50.
Double rooms with bath, \$3 (garage included).

Warrington Hotel—Twenty-Eight Rooms

Single rooms without bath, \$1.
Single rooms with bath, \$1.50.
Double rooms with bath, \$2.50.

Aureau Vista Hotel—Twenty Rooms

Single rooms with bath, \$1.50 and \$2.50.
Double rooms with bath (twin beds), \$2 and \$3.50.

Victoria Hotel—Twenty Rooms

Single rooms without bath, \$1.
Single rooms with bath, \$2.
Double rooms without bath, \$2.
Double rooms with bath, \$2 and \$3.50.

Casa De Anza Hotel—Eleven Rooms

Single rooms, \$2.50.
Double rooms, \$3.50.
Twin beds, \$4.

* * *

Committee on Scientific Exhibits.—To stimulate greater interest in the scientific exhibit at the annual session, a special committee has been appointed by the Council: William J. Kerr, M. D., Lyell C. Kinney, M. D., Frederick Leet Reichert, M. D., Ernest M. Hall, M. D., secretary, and Elbridge Best, M. D., chairman.

* * *

Scientific Exhibits.—Those who are interested in planning a scientific exhibit at the Riverside meeting should apply for space to the Committee on Scientific Exhibits through the State Association office, room 2004, 450 Sutter Street, San Francisco, before the first of March, 1934.

In making application give title and description of exhibit with an estimated amount of floor and/or wall space required.

* Connecting rooms with bath, deduct 50 cents from rate of two rooms. Suites available for parties of three and four.

Cancer Conferences at Riverside.—Again this year the popular Microscopic Pathology Conference and the Radiological Diagnosis Conference, under the auspices of the Cancer Commission, will be held at Riverside on Sunday, April 29, 1934, immediately before the California Medical Association convention.

At each conference, cases are presented and members in attendance have opportunity to study and diagnose microscopic slides or films, following which the important features of the case are discussed by the demonstrators. Complete programs of subjects and cases will be announced later.

The number attending the conferences has to be limited on account of space available and number of slides and films prepared. Members desiring to attend are requested to register as early as possible through the office of the Cancer Commission, 450 Sutter Street, San Francisco, or with the secretary for Southern California, Dr. Orville N. Meland, 1407 South Hope Street, Los Angeles, or with the committees in charge.

RADIOLOGICAL COMMITTEE

Kenneth Davis, St. Vincent's Hospital, Los Angeles.
E. N. Liljedahl, Good Hope Clinic, 1241 Shatto Street, Los Angeles.
Paul Thuresson, 3770 Twelfth Street, Riverside.

PATHOLOGY COMMITTEE

Newton Evans, 1100 N. Mission Road, Los Angeles.
Ernest M. Hall, 3551 University, Los Angeles.
George D. Maner, 523 W. Sixth Street, Los Angeles.

COMPONENT COUNTY MEDICAL SOCIETIES

HUMBOLDT COUNTY

The first regular meeting for 1934 of the Humboldt County Medical Society was held on February 15 at St. Joseph's Hospital, Lane Falk, president, presiding. Sixteen members were in attendance.

Under the present Constitution and By-Laws, election of officers is held annually in March. In order that newly elected officers shall take office on January 1 of each year, it was moved, seconded and carried, that the constitution be amended and that the annual meeting hereafter be held in December.

The election of officers resulted in the following members being elected: President, Orris R. Myers; vice-president, Allen Watson; secretary, Lawrence A. Wing; treasurer, John A. Lane; delegate to the California Medical Association, Orris R. Myers; alternate, Lane Falk.

The scientific paper of the evening, *Films and Pictures of Crippled Children*, was then presented by Howard Markel, M. D., San Francisco.

The next regular meeting will be held on March 15, at which time Dr. Montague S. Woolf of San Francisco will present a paper.

LAWRENCE A. WING, *Secretary*.



MARIN COUNTY

The January meeting of the Marin County Medical Society was held at the Orpheus Grill in San Rafael on Thursday evening, January 19. There were thirty members present.

The program consisted of talks by the outgoing president, Doctor Kuser, and the newly installed president, Dr. H. E. Marston. In his address Doctor Marston outlined his policy and named his committees for the ensuing year. A new constitution was adopted at a previous meeting, and copies were distributed to each doctor.

It was decided that in the future a dinner would precede the regular meeting. If this is satisfactory after three months, it will become a permanent rule.

The officers for the ensuing year are: President, H. E. Marston; vice-president, R. M. Furlong; secretary-treasurer, C. W. Clark.

C. W. CLARK, *Secretary-Treasurer*.

MONTEREY COUNTY

The regular meeting of the Monterey County Medical Society was held on February 2 at Hotel Del Monte.

The meeting was opened by a dinner at 7 p. m. in the Gold Room, with eighteen members present. A letter was read from the state secretary of the Woman's Auxiliary regarding organizing an auxiliary in this county, and it was decided to appoint a committee, consisting of two of the wives of the members, to start the organization work.

Announcement was made of the professional dinner, consisting of doctors, lawyers, and dentists, which is to be held in the Copper Cup Room of the Hotel Del Monte on February 21 at 7 p. m. This dinner has been arranged with the idea of fostering a better feeling between the three professions, and a very enjoyable program is promised by the committee in charge.

Dr. W. M. Gratiot presented an interesting x-ray of a case of osteitis fibrosa and then read a paper on *Exfoliative Dermatitis*. Dr. Garth Parker presented a case of tetanus following abortion. A round-table discussion of the subjects presented was led by Dr. John Gray, acting as chairman, and much of the credit for a very lively and enjoyable meeting is due to his wit in breaking up the usual stiff and formal manner in which a medical meeting is all too often conducted.

The following members were present: L. P. Davlin, C. Galligan, S. W. Hastings, J. A. Merrill, C. Wilson, H. F. Dormody, C. B. Gorham, H. S. Hoyt, Garth Parker, M. Wolfson, H. L. Dormody, W. M. Gratiot, L. C. Johnson, W. R. Reeves, R. M. Fortier, J. R. Gray, W. H. Lawler, and F. E. Wiebe.

The March 2 meeting is to be held in Salinas, and President Hugh Dormody has asked Dr. H. Spencer Hoyt to present cases on intestinal obstruction. The meeting was adjourned about 10:30 o'clock.

WILLIAM H. LAWLER, *Secretary*.



ORANGE COUNTY

The second meeting of the year of the Orange County Medical Association was called to order by President Huffman on February 6 at 8 p. m. in the usual meeting place, the Chapel of the Orange County Hospital.

The Medical Economics and Public Relations committees gave their reports, heartily condemning the insurance plan being brought to this county by a group of lay organizers. The most recent plan submitted called for \$3 a month for a family of four; the promoters to get \$2 of this, and the doctor to get \$1 regardless of the amount of service rendered the family during the month. In addition, certain clauses provided that the policyholder could not be taken care of for any conditions reportable to the health authorities, and as these conditions number some forty-four diseases, the plan would be of little value to the individual who might purchase such a plan. The committee also brought out the fact that the Teachers' Institute was trying to form some such plan whereby they might receive medical care for \$2 a month. As the Institute numbers some fourteen hundred members, the plan calls for careful study by the local association.

The report of the Auditing Committee was accepted.

Mr. Comito, the CWA injury clerk, went into some detail as to the procedure in caring for CWA injury cases.

First reading of the applications of Doctors H. C. Neslund and E. F. Cain was read.

Dr. W. M. Anderson of Los Angeles gave the scientific paper of the evening, which was most thoroughly enjoyed. He spoke on *Physical Diagnosis of the Heart*, and was highly instructive. Discussion was led by Doctors Maroon and Clark. After words of appreciation for the excellent paper, the meeting adjourned.

WALDO S. WEHRLY, *Secretary-Treasurer*.

SAN BERNARDINO COUNTY

The San Bernardino County Medical Society held its regular monthly meeting at the County Hospital in San Bernardino on Tuesday, February 6, at 8 p. m.

The meeting was called to order by the president at eight o'clock. An unusually large attendance, 150 members of the legal, dental, and medical professions, was present.

Announcement was made that a sectional meeting of the American College of Surgeons is to be held in Los Angeles on March 13 and 14.

A letter from the Industrial Accident Section of the Los Angeles County Medical Society was read, and will be printed in the next issue of the bulletin.

A letter from the Public Relations Committee of the California Medical Association relative to the establishment of a speakers' bureau was read. This work was allocated to the Public Relations Committee and the chairman of this committee, Dr. C. D. Hilliard, made an announcement which will be carried out in the next bulletin.

It was moved and seconded that Dr. C. S. Love be reinstated to membership.

The following program for the evening was then given:

What Price Medico-Legal Testimony (illustrated with motion pictures), Dr. W. L. Weber of Los Angeles; *Legal Phases of the Practice of Medicine and Dentistry*, Mr. Ralph Swing of San Bernardino. Discussion was opened on both papers by Dr. G. M. Webster.

The meeting adjourned at 10:30 o'clock, after which refreshments were served.

E. J. EYTINGE, *Secretary*.

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SAN JOAQUIN COUNTY

The stated meeting of the San Joaquin County Medical Society was held in the Medico-Dental clubrooms Thursday, January 4, at 8:15 p. m. President Doughty opened the meeting. The minutes of the previous meeting were read and approved.

Dr. H. J. Bolinger, as chairman, reported that the Special Committee on Mileage Fees recommended that no change be made in rate at the present time. Dr. R. T. McGurk moved that the report be accepted as read. This was duly seconded, and carried.

Dr. H. E. Kaplan, chairman, made the following report for the Committee on Social Problems:

"You have all no doubt read in the newspapers the report on the San Joaquin General Hospital, made after a long and intensive study by the Farm Bureau of San Joaquin County. We appreciate the fact that a great deal of work was devoted to this study, and we want to congratulate the Farm Bureau on their excellent report.

"Your committee has studied this report individually and at the last meeting of the committee our individual views were presented. Your committee has as yet not arrived at any definite recommendation regarding the Farm Bureau report.

"We were very happy to see that a group of taxpayers as well organized as the Farm Bureau recommend in their report that an 'Admitting Committee' be appointed to prevent exploitation of the County Hospital facilities, as has been occurring in the past and is now taking place. They say in their report that exploitation 'is now being and has long been abused in our County Hospital.' We cannot agree with them, however, when they say, 'We see nothing revolutionary or unreasonable in a demand by the San Joaquin County residents that the burdens of sickness be in a measure equalized by a more general use of these excellent tax-supported facilities of our General Hospital.'

"Your committee feels that the county institutions should serve only those that are indigent, and maintain the purpose for which these county institutions were originally organized and built. Your committee feels that the burdens of sickness which fall upon the so-called white collar class should in a measure be equalized by an insurance, well thought out and planned, that will give this middle class hospital and medical

service. This plan would spread the cost among all policyholders and would enable the patient to have not only their choice of physician, but also of hospital. It would pay the cost of this attention before it was necessary for it to be delivered. The committee feels there should be no question of payment to the staff physicians. We feel that if the hospital is restricted to the class of patient that may be legally admitted, the argument that staff members should be compensated would be answered in the negative.

"Your committee will try to secure conferences with committee members of the Farm Bureau. We hope that a plan may be evolved which will be mutually satisfactory to both committees."

President Doughty read a report of his own activities during the year 1933, in which he outlined the things accomplished and recommended goals for future attainment. He then installed the new president, Dr. P. B. Gallegos, and turned the further conduct of the meeting over to him.

After a few opening remarks, President Gallegos called for a vote on the amendments to the Constitution and By-Laws, which, on motion by Dr. D. R. Powell, seconded by Dr. J. F. Doughty, were passed as follows:

Article V, Section 2, now reads: "Nominations are not to be closed until at least double the number to be elected are nominated." It is recommended by our committee that the above words be stricken out.

Article VI—This article provides for the election by ballot of three standing committees:

1. Five members for Admissions Committee.
2. Five members for Medical Ethics and Jurisprudence Committee.
3. Three members for Program Committee.

The change recommends that these committees be appointed by the incoming president, each year, subject to the approval of the Board of Directors.

Under the head of "new business," Dr. C. V. Thompson presented in writing an amendment to the Constitution and By-Laws:

1. An amendment to Article IX of the By-Laws, which completely repeals the existing article.
2. A new amendment to the By-Laws to be known as Article XIII, prescribing the principles of professional conduct of the San Joaquin County Medical Society as provided for by Article II of the Constitution.

There being no further business, Mr. Irving Neumiller, attorney, spoke on the subject of *Malpractice Insurance*. He cited cases in the past history of our county and showed that the skill of the doctor as recognized in courts must be that of the average doctor in our own community.

Attorney Joseph Sweet of San Francisco also addressed the meeting.

These papers were freely discussed by Mr. Burks of the Aetna Company, by Attorneys Gilbert Jones and Gerald Wallace, and Doctors Dewey Powell and Chapman.

Following the meeting, refreshments were served.

C. A. BROADDUS, *Secretary*.

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A stated meeting of the San Joaquin County Medical Society was held in the Medico-Dental clubrooms Thursday, February 1, at 8:15 p. m. President P. B. Gallegos presided.

Dr. Fred DeLappe, district councilor for the Fourth District, was introduced by Doctor Gallegos and reported on the activities of the State Association during the past year. He told of the establishment of an information bureau from which information on all things medical could be obtained. He stated that this was an election year and hence a very important one. All assemblymen will run for reelection. As a county society, we should keep in close contact with the state society so that any information which they want disseminated can be rapidly transmitted.

He presented a résumé of the financial condition of the state society and stated that it was in satisfactory condition; there has been a net loss of seventy-

two members in the state society during the year of 1933, which is very small considering the financial condition of the country, and at the same time he urged that all available doctors of medicine be contacted with the view of their obtaining membership in the county society.

He urged that there be as full an attendance as possible at the State Medical Association meetings each year, as we there obtain contact with physicians from other parts of the state, exchange ideas, and learn something from the papers presented.

The fee schedule of the Napa County Medical Society for industrial x-rays was read and commented on by various members of the society. Doctor Gallegos appointed Doctors R. T. McGurk, C. D. Hol-liger, and C. V. Thompson a committee to study the proposed fee schedule and to report back in March.

The proposed amendments to the Constitution and By-Laws were read and presented to the society for action. It was moved by Doctor Dozier and seconded by Doctor Broadus that these amendments be referred to a committee for further study and revision if necessary. This motion was passed. Doctor Gallegos appointed Doctors Broadus (chairman), Dozier and Thompson of Lodi to study these amendments. Doctor Gallegos appointed the following committee to serve as a combined Hospital Relations Committee and Public Relations Committee: Doctors Dozier (chairman), D. Powell, J. W. Barnes, R. T. McGurk, and G. H. Sanderson. Doctor Gallegos announced that the Program Committee would function as a committee to obtain speakers to appear before lay organizations. He announced that the Admissions Committee would serve as a Membership Committee to contact all available and eligible doctors of medicine in this community and endeavor to secure their membership in the county society.

Doctor Gallegos gave a résumé of the activities of the Committee on Medical Economics. He explained the reasons for the circulation of the agreement of the members of the county society not to serve at any tax-supported institution if it did not have the approval of the medical society, and reported on the acceptance of this agreement by the members of the society. Dr. Frank Doughty moved that the agreement, as signed by the members, be received, sealed and filed. This was seconded by Dr. D. Powell, and the proposed motion was carried.

Dr. D. Powell discussed the Committee on Economics from its conception to the present time, with a résumé of the work accomplished and the contacts made. At the close of his discussion he moved that the committee be discharged with a vote of thanks. This was seconded by Doctor Doughty. The motion was discussed by Doctors D. Powell, F. J. O'Donnell, L. Dozier, C. A. Broadus, and F. Doughty. The motion was carried that the committee be discharged.

Doctor Dozier moved that a new committee on social problems be appointed. This was seconded by Dr. C. V. Thompson, and the motion carried.

Dr. G. H. Sanderson moved that the San Joaquin County Medical Society go on record as endorsing the \$900,000 Port Bond issue. This was seconded by Dr. Frank Doughty, and passed unanimously.

There being no further business before the society the meeting was adjourned and refreshments were served.

G. H. ROHRBACHER, *Secretary*.

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SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held at the Bissell Auditorium of the Cottage Hospital on Monday evening, February 12, at eight o'clock, with President Markthaler presiding.

The society received a rare treat in being favored with a symposium on communicable diseases by the following members of the communicable disease staff of the Los Angeles County Hospital, the only drawback being that there was insufficient time given to each speaker:

Dr. Albert Bower spoke on *Scarlet Fever and Its Treatment*; Dr. Tobias on *Pertussis*; Doctor Venner on *Tetanus*; and Doctor Meals on *Encephalitis*.

The papers were discussed by Doctors Lamb, Johnson, Howard Eder, Richter, Henderson, Lewis, Pierce and Van Paing.

After completion of the scientific meeting, the society went into executive session.

The applications of Doctors Kluss and Tucker were read and, having been approved by the Council, they were elected into the membership of the society.

Doctor Henderson, reporting for the Public Relations Committee, offered the following resolutions:

1. That the Public Relations Committee recommend to the County Medical Society and to the Board of Supervisors that the Dispensary be called the "Santa Barbara County Dispensary."

2. That the Public Relations Committee recommend to the County Medical Society and the Board of Supervisors that the County Dispensary be staffed by members of the County Medical Society and that this staff be selected by a dispensary committee which shall be appointed by the County Medical Society.

3. That no member of the Santa Barbara County Medical Society shall enter into any agreement with any organization or group for professional services without the approval of the society.

4. That any member acting contrary to the above resolution shall be automatically suspended from the county society.

All of these resolutions were unanimously adopted except No. 3, which received a negative vote from Doctor Brown.

The secretary reported that clinical and pathological meetings being conducted by Dr. R. D. Evans in the Bissell Auditorium every second and fourth Friday from 10:45 to 12 noon would be continued if this time were agreeable to the interested doctors.

The president appointed Doctors Preuss, Clark, and Holzman on a committee to draw up a resolution concerning the death of Dr. C. S. Warwick.

A communication was read announcing the California-Nevada sectional meeting of the American College of Surgeons in Los Angeles on March 13 and 14, with headquarters at the Biltmore Hotel.

WILLIAM H. EATON, *Secretary*.

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SOLANO COUNTY

The members of Solano County Medical Society held their regular monthly meeting on February 13 at 8 p. m. at the Hotel Casa de Vallejo. The meeting was preceded by a dinner at which thirty-five members and guests were present. Dr. John W. Green of Vallejo, president of the society, was in charge of the meeting.

Following the dinner, members and guests listened to Dr. Leo P. Bell, former chief surgeon of the Woodland Clinic, and now practicing surgeon in Sacramento. He selected as his topic of the evening, *Lesions of the Stomach and Duodenum*. The address was illustrated by lantern slides. His presentation of this subject was exceptionally well done, and following his paper a great deal of discussion of the paper was carried on by the members.

A second talk was presented by Dr. Donald McNeil of Sacramento on the subject, *Gas Gangrene*. This talk was illustrated by a number of interesting cases.

Those present at the meeting were: Doctors Peterson, Quinn, Ryan, Green, Dempsey, Leachman, Park, Hughes, Brownlie, Snoddy, and Longabaugh of Vallejo; Doctors Finan, Newman, Clymer, and Bransford of Suisun; Doctors Thompson of Rio Vista, Fry of Benicia, Jenney of Vacaville, Stolle of Dixon; Doctors K. Johnson, B. Johnson, Chappell, Socks, Heegler, and Murray of Napa.

Special guests of the evening were: Lieutenant-Commander J. Bryan and Lieutenant F. J. Wharton of the Naval Hospital, Mare Island, and Dr. C. O. Scribner of Sacramento.

Dr. Dwight Murray, president of the Napa County Medical Society, who was present at the meeting, in-

vited the members of the Solano County Medical Society to attend the March meeting of the Napa County Medical Society, which will be held at the Napa State Hospital. Dr. G. Stice, superintendent, and members of the hospital staff will be the hosts on that evening.

The next regular meeting of the Solano County Medical Society will be held at the Hotel Casa de Vallejo on Tuesday evening, March 13. Dr. Hans Lissner, associate professor of medicine at the University of California, will be the main speaker of the evening, his subject being, *Endocrine Disturbances of the Pituitary Gland*. AMBROSE J. RYAN, *Secretary*.



SONOMA COUNTY

The regular monthly meeting of the Sonoma County Medical Society was held at Windsor Castle on February 8 at 7 p. m. There were thirty-six members and guests present, representing Napa, Mendocino, and Sonoma County societies.

Dr. Harry E. Alderson of Stanford University, assisted by Dr. Albert Shumate, gave an illustrated talk on *Skin Diseases and Their Treatment*. The moving pictures used to demonstrate the lecture were taken at the skin and syphilis clinic, Stanford University School of Medicine.

Doctor Alderson's talk was appreciated by all present, and many questions were asked and answered. W. C. SHIPLEY, *Secretary*.



STANISLAUS COUNTY

The January meeting of the Stanislaus County Medical Society was held on Friday, the 12th, at 820 Twelfth Street, Modesto. Twenty members were present.

The speaker for the evening, Dr. H. Clare Shepardson, gave a very interesting lecture on the *Treatment of Diabetes and Treatment of Diabetic Coma*.

The following committees for 1934 were appointed:

Membership Committee—R. Hiatt, E. F. Hagedorn, E. G. Allen.

Public Relations—E. V. Falk, J. F. Collins, E. R. McPheeters.

County Hospital—D. L. Robertson, A. M. Roscoe, Marion Collins.

Medical Economics—N. B. Gould, H. Stewart, L. O. Wissner.

History and Obituaries—E. F. Reamer, J. A. Albert, E. Mayman.

Public Policy and Legislation—E. R. McPheeters, R. E. Maxwell, Elmo Alexander.

Program—J. A. Cooper, E. V. Falk, E. Chouret.

The officers elected for 1934 were: President, J. A. Porter; vice-president, Hans Hartman; secretary, R. D. Husband; censor, E. G. Allen; and delegate, R. S. Hiatt.



The February meeting of the Stanislaus County Medical Society was held at 820 Twelfth Street, Modesto, on the 9th.

The meeting was called to order by the president, Dr. J. A. Porter. Fourteen members were present.

Dr. A. Lincoln Brown gave a very interesting lecture on *Surgery of Pulmonary Tuberculosis*.

R. D. HUSBAND, *Secretary*.



TULARE COUNTY

The February meeting of the Tulare County Medical Society was held at Motley's Café in Visalia on Sunday, the 4th, at 6 p. m., preceded by a dinner.

The new officers for 1934 were installed. President Donald Fowler presided.

After reading of the minutes, the treasurer's report, which showed a balance of \$164.47, was presented.

Various communications were read. The chair appointed the following committees for 1934:

Physical Therapy—Edgar Brigham, Frank Guido. Education—Newton Miller, John Fillmore.

Public Relations—Irvin H. Betts, Walter Tourtellott, Elmo Zumwalt.

Membership—Philip Barber, W. B. Parkinson.

History and Obituaries—Ray Rosson, Annie Bond.

It was announced that the next meeting will be held with the Tulare County Bar Association.

The district councilor, Dr. Fred DeLappe, was present and presented his annual report. He also called attention to the annual meeting to be held at Riverside, April 30 to May 3.

The remainder of the evening was devoted to the guest speaker, Dr. R. Glenn Craig of San Francisco, who presented an able paper on *Pelvic Pain*, with especial reference to the part played by ureteral pain in this field. Lantern slides were utilized to demonstrate his talk. General discussion followed.

Those present were: Doctors Guido, Furness, Betts, Barber, Parkinson, Lipson, Fowler, Weiss, Zumwalt, Kohn, E. C. Bons, Austin Miller, Preston, Nicholson, Palmer Miller, and Tourtellott. Guests included Doctor Mattheas of Tulare and Dr. Francis Weiss of Visalia.

KARL F. WEISS, *Secretary-Treasurer*.



VENTURA COUNTY

The annual dinner of the Ventura County Medical Society was held at 7 p. m. on January 9 at Pierpont Inn, Ventura. After a most enjoyable dinner the group went to Doctor Homer's residence, where the regular business meeting was held, followed by a social program, Dr. C. A. Smolt presiding.

Those present were: Doctors Lillian Smolt, Mosher, Bardill, Hendricks, S. Clark, Strong, Illick, Manning, Osborne, Armitstead, Jones, D. G. Clark, Rich, Homer, and Shore. Guests from Santa Barbara were: Doctors Ullmann, D. Clark, and Wills.

A vote of thanks was extended to the retiring officers.

Committee appointments:

Public Relations—Doctors Coffey, Homer, S. Clark.

Program—Doctor Armitstead, for February; Doctor Osborne, for March.

A discussion regarding information of public interest was given to the press by Doctor Clark. Doctor Ullmann moved that the Public Relations Committee handle any matters of a medical nature to be given to the press, and that Dr. S. Clark contact the press. The motion was seconded and passed.

It was also moved, seconded, and passed, that the society give \$25 to the Public Health League.

Chairman Smolt asked for suggestions aimed to increase attendance at the meetings. Many suggestions followed. One member suggested that we accept no checks for dues from those members who have not attended the required four meetings during the past year and notify such members that they will need reinstatement to continue membership.

Another suggestion was that when sending the notices of dues the secretary write a note with each one, making it clear that they are sending their checks with the understanding that they will attend the required four meetings during the year.

Doctor Smolt said he would first contact the delinquent members personally, and the matter was dropped at that.

It was moved, seconded and carried, that the acceptance of Doctor Whitlow as a member of the Los Angeles County Medical Society should be called to the attention of that society, as Doctor Whitlow's office and residence are both in Ventura County.

FRED A. SHORE, *Secretary*.

CHANGES IN MEMBERSHIP

(New Members (44))

Alameda County.—R. A. Crum, Arne Ely Ingels, Marie B. Kast Kuhlman.

Fresno County.—Vincent Millasich, Benjamin H. Viau.

Kings County.—John Allen Crawshaw, Raul de Campos Pais do Amaral.

Los Angeles County

Henry T. S. Bonesteel	Charles F. McCuskey
Albert S. Chase	Frank R. Morgan
Eugene L. Christensen	H. C. Morrison
Bert Aaron Frey	Ralph E. Netzeley
James A. Gafford	Richard K. Pierce
Leo P. Guenther	Philip Rice
Norval W. Haddow	John Edward Short
Arthur J. Holmes	Lucille McConnell Striegel
Ludwig L. Kaftan	Raymond John Striegel
J. Beckham Marr	Robert R. Walton

Mendocino County.—Harvey E. Pinto.*Merced County.*—Alton C. Atwood.*Monterey County.*—Guy V. Rukke.*San Bernardino County.*—Thomas Arthur Drummond.*San Diego County.*—V. G. Clark.*San Francisco County.*—Maurice Cohen, Charles L. Connor, Morris J. Groper, Alexander Raymond, Alfred S. White.*San Joaquin County.*—W. H. Langley Collis, Neill P. Johnson.*Santa Barbara County.*—H. O. Tucker.*Solano County.*—Edward Morgan Quinn.*Tehama County.*—Arthur H. Menser.*Yolo-Colusa-Glenn County.*—Charles W. Lund.*Yuba-Sutter County.*—O. H. Perry.**Transferred (18)**

William R. Bridgman, from Tulare County to Kings County.

William P. Byron, from Fresno County to Kings County.

Samuel V. Dragoo, from Fresno County to Kings County.

Florence M. Dunlap, from Los Angeles County to Imperial County.

Mabel A. Geddes, from Humboldt County to Orange County.

Masa Harada, from San Francisco County to Sacramento County.

Joseph D. Heitger, from Los Angeles County to Kentucky.

Howard A. Huenergardt, from Orange County to Alameda County.

William A. Johnstone, from Tulare County to Kings County.

Oliver K. Malcolmson, from Los Angeles County to Riverside County.

Ralph Motheral, from Fresno County to Kings County.

T. J. Rankin, from San Bernardino County to San Diego County.

Budd Robbins, from Fresno County to Kings County.

Charles T. Rosson, from Fresno County to Kings County.

Joseph A. Sampson, from Sacramento County to Los Angeles County.

C. E. Schultz, from Los Angeles County to Monterey County.

Aaron S. Torrens, from Fresno County to Kings County.

Neal N. Wood, from Los Angeles County to Alabama, Georgia.

Resigned (11)

Frank S. Byington, from Los Angeles County.

Robert D. Dunn, from San Francisco County.

Malcolm S. Edgar, from Marin County.

William H. Heinzman, from San Francisco County.

Arthur C. McKenney, Sr., from San Francisco County.

Ann L. Martin, from Alameda County.

Henry L. Parish, from Alameda County.

Grant Selfridge, from San Francisco County.

Ernest G. Simon, from Alameda County.

William H. Thearle, from Los Angeles County.

Edward von Adelung, from Alameda County.

In Memoriam

Bates, Walter Earnest. Died at Davis, February 2, 1934, age 74. Graduate of the University of California Medical School, 1881. Licensed in California in 1884. Doctor Bates was a retired member of the Yolo-Colusa-Glenn County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✦

Donnell, Robert Harold. Died at San Diego, January 26, 1934, age 56. Graduate of Bowdoin Medical School, Brunswick, 1901. Licensed in California in 1913. Doctor Donnell was a member of the San Diego County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✦

Ford, Campbell. Died at San Francisco, February 11, 1934, age 70. Graduate of University of California Medical School, San Francisco, 1891. Licensed in California in 1892. Doctor Ford was a retired member of the San Francisco County Medical Society, the California Medical Association, and the American Medical Association.

✦

Leech, Claude Reznor. Died January 13, 1934, age 66. Graduate of Cooper Medical College, San Francisco, 1894. Licensed in California in 1895. Doctor Leech was a member of the Contra Costa County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

✦

McLaren, Jay L. Died at Bell, January 23, 1934, age 72. Graduate of Long Island College of Medicine, Brooklyn, 1888. Licensed in California in 1899. Doctor McLaren was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✦

Scudder, John Hedley. Died January 25, 1934, age 50. Graduate of Jefferson Medical College of Pennsylvania, 1910, and licensed in California the same year. Doctor Scudder was a member of Alameda County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✦

Swisher, James Riley. Died January 31, 1934, age 84. Graduate of the University of California Medical School, San Francisco, 1877, and licensed in California the same year. Doctor Swisher was a retired member of the Sonoma County Medical Society, the California Medical Association, and the American Medical Association.

✦

Van Metre, Harold L. Died January 27, 1934, age 46. Graduate of the State University of Iowa College of Medicine, Iowa City, 1915. Licensed in California in 1921. Doctor Van Metre was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✦

Warwick, Charles Spurgeon. Died January 27, 1934, age 39. Graduate of the University of Oregon Medical School, 1929. Licensed in California in 1930. Doctor Warwick was a member of the Santa Barbara County Medical Society, the California Medical Association, and the American Medical Association.

OBITUARY

James Riley Swisher
1849-1934

Dr. James Riley Swisher passed away at his home in Healdsburg January 31, 1934. He was born in Danville, Illinois, July 5, 1849, grew up on a farm and at the age of eighteen he entered the University of Illinois, and after graduation he taught school.

He came to California in 1875, entered Toland Medical College, from which he was graduated in November, 1877.

In that same month he started practice in Healdsburg. In 1884 he went to Europe, where he studied in London, Berlin, and Vienna for two years, returning to Healdsburg in 1886. Doctor Swisher continued the practice of his profession until about five years ago, when on account of total blindness he was compelled to retire.

Doctor Swisher was a member of many fraternal orders and served on the Healdsburg Board of Education for over twenty-five years. Because of his retirement from active practice and his years of affiliation with the medical association, he was granted retired membership in the Sonoma County Medical Society, the California Medical Association, and the American Medical Association.

Doctor Swisher served the people of his community ably and well for over fifty years. His friends were legion, and his good works will live after him in the memory of those who knew and loved him.

W. C. SHIPLEY.

CANCER COMMISSION*

TUMORS OF THE CENTRAL NERVOUS SYSTEM

This outline is an abbreviated summary of ideas generally accepted regarding tumors of the central nervous system.

I. BRAIN TUMORS

Incidence.—The prevalent accepted opinion of the medical profession is that brain tumor is of rare occurrence. That the contrary is true is substantiated by postmortem statistics. Ten to twelve per cent of all tumors of the body occur in the brain.

Malignancy.—Few are malignant in the pathologic sense, that is, they do not metastasize; but all growing tumors within the cranium produce serious disability and usually eventuate in death, if not successfully treated.

TYPES

1. **Fibroblastic.**—These comprise something less than half of all brain tumors (endotheliomas, meningiomas, neurofibromas). They are usually benign, slow growing, well encapsulated, and complete removal with permanent cure is often possible.

2. **Glioma.**—Half or perhaps somewhat more of brain tumors belong in the general group of gliomata, of which there are ten to fifteen types based on differentiation of medullary epithelium. The behavior of the whole group varies tremendously, but is fairly characteristic in the chief subgroups, listed as follows:

(a) **Astrocytoma** (about half of all gliomas).—Slow growing, often cystic, frequently near the cortex, fairly well encapsulated, their characteristics encourage total or partial removal. Remissions tend to be long, with occasional permanent cures.

(b) **Spongioblastoma** (glioblastoma: half or less of gliomas).—These are the most malignant of gliomas, since they infiltrate brain substance and are rapidly growing with great vascularity. This type of tumor is

* The Cancer Commission was brought into being by the House of Delegates of the California Medical Association to aid in the furtherance of all efforts to combat cancer. The roster of officers and the central office of the Commission to which communications may be sent is printed in this issue of CALIFORNIA AND WESTERN MEDICINE (see front cover directory). This column is conducted by the Secretaries of the Commission.

responsible for the general feeling of pessimism regarding all brain tumors, and especially gliomata.

(c) **Medulloblastoma** (a small group of special interest due to unique susceptibility to x-ray therapy).—Usually found in posterior fossae of children, they spread and multiply by implantations in the subarachnoid spaces. Decompression and x-ray therapy give the most satisfactory remissions.

3. **Metastatic Lesions.**—Intracranial symptoms associated with malignancy elsewhere suggest metastatic tumor. Occasionally brain symptoms are first noted and pathological examination gives the first clue to malignancy elsewhere. Rapid development and symptoms and signs of multiple foci suggest inflammatory or metastatic lesions. The lung, kidney, and breast are the most frequent sites of primary growths metastasizing to the brain. Decompression for relief of headache is the only operative measure if diagnosis is reasonably positive. Radiation may provide definite palliation.

4. Pituitary Tumors.

(a) **Supracellar Cysts** (craniopharyngeal pouch or duct tumors).—These are congenital. Symptoms begin in childhood, and are often associated with a pituitary deficiency syndrome. X-rays show filmy supracellar deposits in a high percentage of cases. Pressure symptoms of impaired vision, headache, and vomiting necessitate operation.

(b) **Adenoma.**—(1) Chromophobe (70 per cent)—glandular deficiency syndrome; (2) chromophil (30 per cent)—gigantism and acromegaly.

Many patients without obvious glandular symptoms have pressure symptoms that imperil vision and life. Also, many patients with outstanding glandular symptoms develop pressure and eye symptoms late in life or not at all. Visual symptoms are: (1) impaired acuity; (2) restriction of visual fields. Primary optic atrophy is the usual finding. Bitemporal hemianopsia is characteristic, but other defects are significant. X-rays usually reveal an enlarged sella with separation of the clinoids.

Therapy.—Radiation therapy may relieve headaches, improve acuity, and enlarge fields. During treatment the patient should be examined frequently, since there is a slight danger of an exacerbation due to edema. Preservation of useful vision recommends conservative measures. Further impairment of acuity or decrease in visual fields necessitates operative measures. **Operation** offers a fair chance for a remission of symptoms over a period of years. Without operation, in cases that progress in spite of x-ray therapy, the outlook is blindness and death.

DIFFERENTIAL DIAGNOSIS

Gumma.—These lesions are relatively rare, but strangely enough are frequently considered to be common. Brain tumor patients are frequently treated for lues because of a suggestive history or Wassermann reaction—occasionally, in spite of negative history and Wassermann. Brain symptoms and intracranial pressure mean tumor in the majority of cases. Intracranial pressure due to lues usually subsides with effective therapy. Gumma removal is rarely necessary, but occasionally choked disks endangering useful vision demand decompression relief.

Tuberculoma.—Tuberculoma is usually multiple and secondary to pulmonary infection. Signs and symptoms of a single lesion suggest the possibility of some other type of lesion and require exploration.

Solitary and large lesions have been removed in a few authentic cases with cure, but surgery is not indicated in the great majority of cases.

SYMPTOMS AND SIGNS OF INTRACRANIAL TUMORS

General Pressure Symptoms.—Many tumors cause intracranial pressure symptoms late, and few not at all. Absence of pressure symptoms *does not rule out tumors*.

Persistent Headache.—This is the commonest symptom and may be general or local. It may have suggestive characteristics, but nothing pathognomonic. **Vomiting:** The most characteristic feature is the lack of nausea. The projectile type is not as frequent as textbooks suggest. **Choked disks** are diagnostic of increased intracranial pressure, of which tumor is the

most likely cause. (Vascular hypertension and sinus disease occasionally cause disk changes.)

Conscious State.—It ranges from mental dullness to coma.

Medullary Disturbance.—Slow pulse, slow or Cheyne-Stokes respiration, yawning, sighing, nose-rubbing, are characteristic.

Symptoms and Signs of Localizing Value.—Symptoms and signs of increased intracranial pressure or dysfunction, suggesting pathology referable to any part of the brain, or to one or more cranial nerves, necessitate a complete and systematic neurological examination. Textbooks on neurology outline and give adequate descriptions, but chief reliance must be placed on the thoroughness of the examiner.

Suggestive symptoms are: headaches, vomiting, impaired vision, defects of visual fields, mental impairment, personality changes, weakness (face or limb), impaired sensation, disturbances of speech, staggering, incoördination, and convulsions.

Convulsions.—Emphasis of this symptom is essential. While they may be due to other causes, grand mal and petit mal attacks, or Jacksonian epilepsy (particularly if the onset is in adult life), are most characteristic of brain tumor.

ACCESSORY EXAMINATIONS

X-Ray

1. Signs of general pressure: In children, convolitional atrophy, separated sutures, depression of clinoids.

In adults, unusual markings, bony tumors, erosion or invasion of bone by tumor, as in pituitary lesions, acoustic neuroma, meningiomata.

2. Localizing signs: (a) Calcification in tumor or cysts, not forgetting that abscesses and aneurysms may also calcify; (b) calcification of arteries and veins in vascular tumors; (c) displacement of markings, *e. g.*, pineal calcification, choroid plexus calcification.

Spinal Puncture.—Spinal puncture is a diagnostic help of great importance, but frequently attended with considerable risk. The danger is real in the presence of choked disks, since posterior fossa tumors, especially, are apt to cause herniation of the medulla into the foramen magnum with death. Manometer estimation of pressure is very essential, and should be done in every case. Laboratory examination of the fluid will be valuable in differential diagnosis of acute or chronic inflammatory disease.

Encephalograms.—Introduction of air by the spinal route is often of great value in nonpressure cases. It is dangerous in the presence of intracranial pressure, or signs of a posterior fossa tumor.

Pneumoventriculograms.—Introduction of air into ventricles directly is the method of choice in pressure cases. The procedure entails, however, a definite mortality; and considerable experience is necessary to interpret findings both at operation and from films taken after injection of air.

Perimetric Field Tests, Barany Tests, Basal Metabolic Rate.—These tests are frequently of great value first, in making the diagnosis of an intracranial tumor and, second, in localization.

Differential Diagnosis.—This is occasionally difficult in spite of all the special examinations enumerated above. Conditions which may simulate the symptoms of brain tumor are: brain abscess, encephalitis, hypertension (malignant, arteriosclerotic) subdural hematoma, sinus disease, tuberculosis, syphilis.

If one can make the diagnosis of a space-consuming lesion and localize it with reasonable certainty, operation should be strongly considered.

TREATMENT

Operation.—Total removal and cure is the ideal aim, and may be accomplished for some of the types of brain tumor. Partial removal with relief of symptoms and prolongation of life is usually possible.

Radiation Therapy.—This is of definite value in many cases of pituitary tumor, and in nearly all cases of medulloblastoma. Endotheliomas and most gliomas are not ordinarily influenced by radiation, and should be treated surgically. (One member comments that protracted massive radiation has sometimes pro-

duced regression.) Excepting in pituitary tumors, operation for decompression and, if possible, biopsy are necessary steps before irradiation.

Nonoperative Therapy.—There is no specific medicinal therapy for tumors. Intravenous hypertonic salt or sugar solution give temporary relief of symptoms due to intracranial pressure. Magnesium sulphate by mouth or rectum gives transitory relief. Its value is questionable, in view of the transitory relief and the danger of fatality due to disturbances of intracranial pressure relations; but occasionally helpful in desperate cases. Temporary relief of symptoms may give opportunity for surgical therapy. Magnesium sulphate and amytal are of value in controlling convulsions incidental to tumors.

II. SPINAL CORD TUMORS

Incidence.—Spinal cord tumors represent 2.60 per cent of all tumors as recorded in a series of thirty-five thousand autopsies. (One-sixth as frequent as brain tumors.)

Location.—Spinal cord tumors may occur at any level along the spinal cord or throughout the length of the cauda equina. The greatest number occur in the dorsal region, this being the longest regional division of the cord. They may arise from the meninges, such as the arachnoid or the dura, the nerve roots, ganglia, or the elements of the cord itself, or they may arise from the surrounding bony and soft tissue parts. They may be intramedullary (about 14 per cent of the total) or extramedullary, including both intradural and extradural (80 per cent).

Pathologic Types

- (a) *Malignant.*—Metastatic carcinoma (3 per cent).
- (b) *Semimalignant.*—Sarcoma (20 per cent). Many of these are relatively benign types.
- (c) *Benign.*—Neurofibroblastomata (23 per cent); dural endotheliomata (10 per cent).
- (d) *Other various benign types* (44 per cent).

Signs and Symptoms

Spinal cord tumors may be detected by the following conditions:

- 1. Root pain for long periods antedating cord signs;
- 2. Paresthesias, hyperesthesias;
- 3. Girdle and band-like sensations about the thorax and abdomen;
- 4. Muscle tremors and spasticity;
- 5. Motor weakness of the extremities;
- 6. Sensory loss;
- 7. Vasomotor changes or trophic disturbances below the level of involvement;
- 8. Sphincter loss.

Careful neurological examination, with especial reference to the level of the motor and sensory change, is important to localize the level of the cord compression.

Special Diagnostic Procedures

- 1. Spinal puncture, with careful manometric readings and Quackenstedt test for block in the spinal canal.
- 2. Examination of the spinal fluid frequently shows xanthochromia and increased protein and globulin.
- 3. Combined cistern and lumbar puncture in obscure cases, with differential pressure readings, and differential spinal fluid examination.
- 4. X-ray plates which may show bone changes indicative of tumor.
- 5. Lipiodol injections followed by x-ray studies for localization and indication of block. Not more than two cubic centimeters of lipiodol is necessary or safe.

Differential Diagnosis.—Several conditions must be considered in the differential diagnosis, and these are listed below. It is important, however, to remember that a spinal puncture which indicates some degree of block in the spinal canal is the most important single diagnostic aid in the detection of spinal cord tumor.

- | | |
|----------------------------|----------------------|
| 1. Multiple sclerosis | 7. Arthritis |
| 2. Myelitis | 8. Spondylolisthesis |
| 3. Combined system disease | 9. Leptomenigitis |
| 4. Syphilis | 10. Pachymenigitis |
| 5. Syringomyelia | 11. Herpes |
| 6. Tuberculosis | |

Treatment.—Medicinal treatment in tumor is of no value except where the etiologic factor might be luetic. Surgery is indicated in every diagnosable tumor except that of obvious malignancy, such as metastatic carcinoma. The sarcomas found involving the spine and cord are in the majority of cases relatively benign and may be removed. Laminectomy, with removal of the tumor in so far as possible, is the treatment of choice.

Radiotherapy is of little help in the treatment, except where there may be a spinal distribution of a medulloblastoma. Radiation therapy is, of course, in order for certain bone tumors of the spine causing nerve symptoms from pressure, *e. g.*, metastatic carcinoma, giant-cell tumor, myeloma, Ewing's tumor, and possibly osteogenic sarcoma.

Early and accurate diagnosis is exceedingly important in order to prevent irreparable damage to the cord.

Prognosis.—The outlook in cord tumors is exceptionally good, due to their relatively benign character. If operation is accomplished before permanent cord damage has taken place, a very large percentage may be completely cured or relieved for long periods of time. Laminectomy and decompression frequently give worthwhile remissions and, often, relief of pain in the semi-malignant or even frankly malignant tumor cases. Radiation gives relief in a small group of radiosensitive tumors (*e. g.*, metastases from medulloblastoma and in certain bone tumors as mentioned above).

SUMMARY

1. Brain tumors are relatively common. All are malignant in a clinical sense, but a considerable number of cases can be cured and the great majority given relief. They are, therefore, worth early diagnosis just as are tumors arising elsewhere.

2. Symptoms which should lead to suspicion of brain tumor are: headaches, vomiting, visual disturbances; mental and personality changes; sensation, speech and motor disturbances; convulsive attacks in adult life.

3. Spinal puncture should be undertaken only after other diagnostic means have been exhausted, *including consultation*. This rule applies also to air-injection methods.

4. Spinal cord tumors are less common than brain tumors, but are exceptionally amenable to surgery. They should be suspected in the presence of either sensory or motor disturbances, especially pain at or below the distribution from a segment of the cord. Not only do actual sensory or motor paralysis suggest tumor, but also paresthesia, trophic changes, vasomotor disturbances, tremors, etc. It is important to make an early diagnosis to prevent permanent pressure damage to the cord with progressive growth of the lesion.

5. Tumors of cranial nerves, spinal roots, and peripheral trunks are relatively uncommon, usually benign (though some are malignant), and are commonly amenable to surgical removal.

III. TUMORS OF NERVES

Incidence.—Tumors of cranial nerves, spinal roots, and peripheral nerve trunks are relatively rare.

Malignancy.—The great majority are benign, including:

- (a) Fibroblastoma—benign single tumors.
- (b) Neurofibromata—Von Recklinghausen's disease.
- (c) Neuro-epithelioma—rarely malignant tumors occur.

Malignancy.—This is suggested by

- 1. Rapidity of growth.
- 2. Destruction of nerve fibers.
- 3. Invasion of contiguous structures.
- 4. Metastatic lesions.

Every tumor should be examined microscopically by a competent pathologist.

SYMPTOMS AND SIGNS

(a) Peripheral nerve tumors present one or more of the following:

- 1. Persistent pain.

2. Sensory or motor dysfunction referred to one nerve.

3. Palpable tumor mass.

(b) Root tumors are suggested by

1. Pain in the distribution of the root involved.

2. Motor and sensory dysfunction referred to one root.

3. More general cord symptoms may arise from pressure so that root tumors closely simulate tumors of the cord itself.

4. Thoracic or abdominal symptoms (true referred pain) may occur.

5. X-ray evidence: (a) Erosion of vertebrae; (b) Shadows in lung.

(c) *Cranial Nerve Tumors.*

1. The auditory, optic and trigeminal nerves are most frequently involved.

2. The characteristic symptoms are of dysfunction, referable to one nerve.

3. General brain tumor symptoms may be presented.

4. The x-ray may show erosion of foramina.

TREATMENT

1. Cranial nerve tumors require surgical removal.

2. Root tumors necessitate removal by laminectomy approach, and extensions often require thoracic or abdominal approach.

3. Peripheral nerve tumors require complete removal to prevent recurrence. Resection of the nerve is not always necessary.

Prognosis.—In view of the fact that nearly all tumors of nerves are benign, complete surgical removal will result in cure. Partial removal of inaccessible tumors will give long remission.

Submitted by the Committee on Tumors of the Central Nervous System:

Howard Fleming, Chairman	†George G. Hunter
F. L. Reichert, Secretary	O. W. Jones, Jr.
Warren B. Allen	Milton B. Lennon
Howard A. Brown	H. C. Naffziger
Nathaniel H. Brush	Walter F. Schaller
Cyril B. Courville	E. B. Towne
Mark Gerstle	

C. M. A. DEPARTMENT OF PUBLIC RELATIONS*

The Test of Organized Medicine†

The past months have seen the development of federal control not only to an unprecedented extent, but to one undreamed of. That control has extended into many fields which were considered exempt from government interference—business, production, agriculture, have all been brought under the yoke. Wiser men than I, men whose life work has been in the field of political economy, admit that they cannot foresee the far-reaching effects of these new policies, nor predict how far they may extend, so that I need not hesitate to confess that I am unable to pass judgment on them even if I were so inclined. I am mentioning them here for a very different reason—because I would call attention to the fact that the medical profession has thus far not only escaped hampering federal restrictions, but has in a sense received federal endorsement, a vote of confidence from the Government, as it were.

In the bulletin issued by the Federal Civil Works Administration, entitled "Rules and Regulations No. 5,"

‡ Deceased.

* An open forum of progress notes on the department's activities and for brief discussions on medical economics. Correspondence and suggestions invited. Address Walter M. Dickie, Room 2039, Four Fifty Sutter Street, San Francisco. This column is conducted by the Director of the Department.

† Reprinted from the *Federation Bulletin*, February, 1934.

under the head of Medical Treatment, it is specifically provided that: "In locations where neither public nor designated medical facilities exist, or where the number of such facilities is inadequate to furnish the service required, local Civil Works administrators are authorized to arrange the medical care by reputable private physicians. This does not include the use of osteopaths or chiropractors unless treatment by such practitioners is recommended by the Government or designated private physician." This recognition of the difference between scientific medicine and the left-handed schools of so-called healing is something which we have failed to achieve in our own state, and to me at least, it is most gratifying that such recognition should come to the profession from the Federal Government.

In still another matter, the Government has recognized and paid tribute to the medical profession in its handling of the medical phases of its CWA work. While it provides fixed fees to be paid for hospitalization, for laboratory work, for x-ray examination, it does not fix a medical fee schedule beyond providing that "the fees charged shall not be in excess of those charged patients in the same income class as the injured person." It is as though the Government recognized that the medical profession in its Hippocratic code already possessed all needed regulations, that such a code of necessity transcends any lesser regulations such as might be provided by the NRA or CWA or the PWA.

There is, however, nothing permanent, nothing unchangeable, about the present regulations. We still face a very real danger. If tomorrow the Government should find that certain physicians are failing to abide by this code, it can provide new regulations; it can take over the entire medical work of the CWA, arrange to have it done by salaried government employees, and so take the first steps toward state medicine. In other words, you and I, the members of the medical profession as a whole, are at the mercy of the individual physician; our fate, whether or not we are to continue as individual members of a great profession, or are to become mere cogs in the machine called state medicine, depends on whether each and every one of us plays the game. Unless we are mere dreamers, we must admit that no large group of humans is 100 per cent perfect, and we must face the fact that there are sure to be those who will seek personal profit at the cost of the group welfare—unless we as an organization control them.

Group control through organized medicine is the answer to our problem. If it is to be every man for himself there can be no question but that we shall soon find state medicine a reality. Because I believe that state medicine would be a mistake, a tragedy, not only from the standpoint of the individual physician, but from the standpoint of the welfare of the nation and the continued advancement of medical science, I want to stress once more the vital need for organization, for strong organization, in medicine. Such organization, and only such organization, can insure freedom to the individual and to the profession in medicine. Individualism and freedom in scientific pursuits have meant advancement in the past and we must look to them for advancement in the future. Organized medicine must have the support of every thinking physician if we are to continue to advance.

Working as individuals, we can do nothing to stem the tide if it turns toward state medicine. As members of a great national organization, the American Medical Association, we can do much. But we must remember that this national organization is strong only as it has the support of its component state medical societies, and that these state societies are strong or weak as the county medical societies that compose them are strong or weak, loyal, or indifferent. Now is the time for each component county society to show its strength and its loyalty, to hold its membership to the spirit of the Hippocratic code that we may escape membership in a mere trade-union, and the code control of the Federal Government.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION*

Component County Auxiliaries

Alameda County.—The last meeting of the Woman's Auxiliary to the Alameda County Medical Association was held at the Women's Athletic Club in Oakland on Friday, January 19. Luncheon was served to 156 members and their guests at one o'clock.

Mrs. A. F. Davis of San Leandro was luncheon hostess, and was assisted by Mrs. A. W. Henry and her committee. Mrs. Roy Nelson took charge of the reservations for the day.

Dr. George G. Reinle, the president of the California State Medical Association, honored the organization by his presence, and introduced the speaker, Mr. Ben H. Read. Mr. Read is the executive secretary of the Public Health League of California, and gave a most interesting and enlightening talk on *Legislative Problems of Vital Importance to the Medical Profession*. The value of the auxiliary to the medical profession was brought out, and the auxiliary members were authorized by Mr. Read to help the Public Health League.

After Mr. Read's talk there was a round-table discussion, of which Mrs. Harold Trimble was chairman. Mrs. Dudley Smith spoke on *The Origin of the National Auxiliary*; Mrs. Milton Shutes on *The Origin of the Alameda County Auxiliary*; Mrs. Thomas Clark on *Our Relation to the Alameda County Medical Society*; Mrs. L. G. Chamberlain on *Our Relation to Doctors' Families*; and Mrs. Lloyd Kindall spoke on *Our Relation to the Parent-Teacher Associations*.

After this, Mrs. A. M. Henderson, the state president and our honor guest, spoke on *Some Highlights from the State Auxiliary*. Several other state officers were also present, namely, Mrs. E. C. Von Geldern, corresponding secretary, and Mrs. Thomas Clark, second vice-president.

The meeting was concluded with an important business discussion.

Orange County.—Installation of new officers featured the annual meeting of the Orange County Medical Association in the Ebell Clubhouse, when Dr. Harry G. Huffman was installed president, to succeed Dr. W. S. Wallace.

The regular program for this meeting was published in the January issue of CALIFORNIA AND WESTERN MEDICINE, under a report by the secretary, on page 130.

The meeting was a joint event, both the members of the Orange County Medical Association and the Auxiliary attending. During the dinner hour, music was furnished through a public address system, installed by Walt Carruthers. Entertainment featured the Santa Ana Junior College quartet.

Riverside County.—A business and social meeting for members of the Woman's Auxiliary to the Riverside County Medical Association was held Monday evening at the Community Hospital, with eighteen present. During the business session, plans were discussed for the conventions of the medical association and auxiliary, to be held in Riverside in the spring.

A social evening followed, with bridge as the diversion. Later, refreshments were served. Hostesses were: Mesdames H. J. Wickman, T. A. Card, Bon O. Adams, and A. W. Walker.

* As county auxiliaries to the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Thomas J. Clark, chairman of the Publicity and Publications Committee, 40 Ross Circle, Oakland. Brief reports of county auxiliary meetings will be welcomed by Mrs. Clark and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate one page in every issue for Woman's Auxiliary notes.

Sacramento County.—The regular meeting of the Woman's Auxiliary to the Sacramento Society for Medical Improvement was held Tuesday evening, January 16, at the home of Mrs. Frank P. Brendel. Mrs. Howard Hall, the new president, presided over a short business meeting. After the minutes and reports were read, request was made for more books for the county hospital patients, and magazines were solicited for the Federal Center for men. It was decided to place \$50 of our money in a savings account to begin a sum to be used for some worthy purpose. Any suggestion as to what purpose will be welcome.

Mrs. Scatena announced that Doctor Kilgore will speak on cancer before the Women's Clubs next month at the Tuesday Club, under the auspices of the auxiliary. The members of the Tuesday Club who are also members of the Auxiliary will hold a tea, following the lecture.

A letter from the state president, Mrs. A. M. Henderson, outlining her plans for the year and containing suggestions from the report of the national president, Mrs. J. Blake, was read.

The meeting was adjourned and turned over to the program chairman, Mrs. Burt Howard. Mrs. Wessie Fisher sang three Russian folk songs most delightfully, and then Mrs. Alexander Berman was introduced. She told us of her recent trip through Russia, which was very entertaining. Mrs. Berman was born in Russia, and her son is an intern in a Sacramento hospital.

After the program Mrs. Brendel, assisted by Mesdames Dave Dozier, Cordes Ankele, Hans Schlueter, Ed Babcock, and F. Lee, served refreshments.

MRS. FRANK P. BRENDEL,
Corresponding Secretary.

San Diego County.—The Woman's Auxiliary of the San Diego County Medical Society held its January meeting in the main dining room of the San Diego Club.

Mrs. Weaver, representing the Community Chest's Central Clinic Service, gave a résumé of the work accomplished by the Clinic during 1933. This part-pay clinic, which has been in existence one year, is the first of its kind in the state of California, and has been of vital service to the community.

ELIZABETH H. EAGER, Secretary.

San Joaquin County.—At the last meeting of the Woman's Auxiliary to the San Joaquin County Medical Association, Stockton, the following officers were elected for the year 1934: President, Mrs. George H. Sanderson; vice-president, Mrs. S. W. R. Langdon; secretary, Mrs. Fred J. Conzelmann; treasurer, Mrs. J. F. Doughty; director, Mrs. J. W. Craviotto.

At that meeting, Doctor O'Connor, medical director of Bret Harte Sanitarium gave an illustrated address on *Tuberculosis*, emphasizing the preventive side.

ELLA B. CONZELMANN, Secretary.

Santa Barbara County.—The Woman's Auxiliary to the Santa Barbara County Medical Society met at the home of Mrs. Francis J. Hamboch, 2119 State Street, Friday afternoon, January 12, at 3 p. m.

Fifteen members were present. Mrs. Van Paing presided at a short business session. Letters of appreciation from the Chamber of Commerce for our contribution to the fund for Santa Barbara's entry in the Tournament of Roses parade and from the graduate of St. Francis Training School, Miss Kathryn Lauritzen, for the award of \$10, presented by our auxiliary on graduation day.

The meeting was then given over to informal discussion of plans for our first annual benefit. This party, a bridge tea, was scheduled for February 6 at the Samarkand Hotel. Each member of the auxiliary was asked to sponsor a table of bridge or bring guests to tea. Doctors' wives who were not auxiliary members also were invited to make up tables or bring guests in to tea.

MABEL C. HUNT, Secretary.

NEVADA STATE MEDICAL ASSOCIATION

D. A. SMITH, Mina President
E. E. HAMER, Carson City.....President-Elect
J. N. VAN METER, Las Vegas First Vice-President
W. H. FROLICH, East Ely Second Vice-President
HORACE J. BROWN, Reno.....Secretary-Treasurer

COMPONENT COUNTY MEDICAL SOCIETIES

WASHOE COUNTY

The Washoe County Medical Society held its regular monthly meeting on the evening of February 13 in the State Building, Reno.

As the subject of the meeting was a symposium of *Cancer of the Breast*, it was decided, in order that the meeting might be concluded in time for the out-of-town guests to take the train, that we would hear the scientific program first and that the business meeting could come after.

The first speaker was Dr. Lawrence Parsons, pathologist for St. Mary's Hospital, Reno, who spoke on the *Pathology of Breast Cancer*. It was a most excellent review of the latest findings in cancer pathology. This was followed by a most interesting and scientifically instructive talk by Dr. George Stevenson Sharp of Pasadena, on the *Radiologic Treatment of Breast Cancer*. Many new details of treatment were brought out with reference to the dosage of radium and x-ray in the preliminary and in the postoperative treatment. This excellent address was followed by Dr. Alson R. Kilgore of the University of California, who spoke upon the *Operative Treatment of Breast Cancer*. The talk was illustrated with many excellent lantern slides, showing some new things in the technique of surgical attack.

The talk by these men was most highly appreciated by a large and distinguished group of upward of seventy persons, and a great many physicians when called upon responded in very eulogistic terms of the presentation of the respective subjects by the speakers.

Following this the society had a recess for five minutes, upon conclusion of which the society went into the transaction of the routine affairs. Owing to the lateness of the hour, the reading of the minutes was dispensed with. The applications for membership of Dr. L. S. Bambauer of Fernley and Dr. Noah Rouse of Carson City, which had been referred to the censors for approval, were approved by them and, upon motion and vote, they were accepted into the membership of the society. A communication from Dr. Edwin J. Hund, stating certain alleged irregularities in the newly organized clinic, was submitted to the Board of Censors for their action and report. However, since Dr. Fleet Harrison, one of the censors, did not reside in Reno, the president appointed Dr. A. R. DaCosta to act in his stead. The question arose with reference to the change of the meeting night, and the same was referred to the Board of Censors to ascertain from the individual members what night of the month would be most acceptable, and report at the next meeting. Then came the question of the activities of the CWA, the federal organization, in its relation to the child clinic and the services of the members of the society in its behalf. Upon motion and adoption the secretary was instructed to furnish the head of the CWA in Reno a list of all the members of the county medical society and to inform the CWA authorities that the profession would be willing to accept the fees for medical and surgical service as are laid down by the Nevada Industrial Commission.

There were about seventy persons present, representing a large portion of the dental profession of the city, likewise a large number from the university of the pre-medical class.

THOMAS W. BATH, Secretary.

MISCELLANY

Under this department are ordinarily grouped: News; Medical Economics; Correspondence; Twenty-five Years Ago column; Department of Public Health; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings

American Medical Association, Cleveland, Ohio, June 11 to 15, 1934. Olin West, M. D., Secretary, 535 North Dearborn Street, Chicago, Illinois.

California Medical Association, Riverside, April 30 to May 3, 1934, Emma W. Pope, M. D., Secretary, 2004 Four Fifty Sutter, San Francisco.

California-Nevada Section of American College of Surgeons, Los Angeles, March 12 and 13, 1934. C. Hiram Weaver, Secretary, 1709 West Eighth Street, Los Angeles.

Clinical Congress of the American College of Surgeons, Boston, October 15 to 19, 1934. Franklin H. Martin, M. D., Director General, 40 East Erie Street, Chicago, Illinois.

Medical Broadcasts*

American Medical Association Health Talks.—A new program arrangement has been concluded through the courtesy of the Columbia Broadcasting System for a weekly broadcast on the Educational Forum from 4:30 to 4:45 p. m., central standard time, each Thursday, beginning February 1.

The plan of the program is a ten-minute health talk, preceded and followed by selections by the studio orchestra.

The American Medical Association broadcasts each Monday afternoon from 4 to 4:15 p. m., central standard time (2 p. m., Pacific standard time), over the network of the National Broadcasting Company.

The American Medical Association broadcasts on Tuesday and Thursday morning from 8:55 to 9 a. m., central standard time, over Station WBBM (770 kilocycles, or 389.4 meters).

San Francisco County Medical Society.—The San Francisco County Medical Society broadcast program for the month of March is as follows:

Tuesday March 6—KJBS, 11:30 a. m., and KFRC, 1:35 p. m. Subject: The Menace of Malnutrition.

Tuesday, March 13—KJBS, 11:30 a. m., and KFRC, 1:35 p. m. Subject: Little Glands with Big Jobs.

Tuesday, March 20—KJBS, 11:30 a. m., and KFRC, 1:35 p. m. Subject: The Nature of Cancer.

Tuesday, March 27—KJBS, 11:30 a. m., and KFRC, 1:35 p. m. Subject: Radium Fakes.

Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of March is as follows:

Thursday, March 1—KFAC, 9:15 a. m. Subject: Your Doctor and You.

Saturday, March 3—KFI, 9:15 a. m. Subject: Health Talk.

Tuesday, March 6—KECA, 11:15 a. m. Subject: Health Talk.

Thursday, March 8—KFAC, 9:15 a. m. Subject: Your Doctor and You.

Saturday, March 10—KFI, 9:15 a. m. Subject: Health Talk.

Tuesday, March 13—KECA, 11:15 a. m. Subject: Health Talk.

* County societies giving medical broadcasts are requested to send information as soon as arranged (giving station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

Thursday, March 15—KFAC, 9:15 a. m. Subject: Your Doctor and You.

Saturday, March 17—KFI, 9:15 a. m. Subject: Health Talk.

Tuesday, March 20—KECA, 11:15 a. m. Subject: Health Talk.

Thursday, March 22—KFAC, 9:15 a. m. Subject: Your Doctor and You.

Saturday, March 24—KFI, 9:15 a. m. Subject: Health Talk.

Tuesday, March 27—KECA, 11:15 a. m. Subject: Health Talk.

Thursday, March 29—KFAC, 9:15 a. m. Subject: Your Doctor and You.

Saturday, March 31—KFI, 9:15 a. m. Subject: Health Talk.

American Board of Ophthalmology.—If a sufficient number of candidates are interested, the American Board of Ophthalmology will conduct an examination at Butte, Montana, July 16, at the time of the meeting of the Pacific Coast Oto-Ophthalmological Society.

Applicants for the certificate should immediately communicate with the secretary, Dr. William H. Wilder, 122 South Michigan Avenue, Chicago, Illinois.

New York Polyclinic Medical School and Hospital. The following special lectures were given at the New York Polyclinic Medical School and Hospital: On Wednesday, January 10, "Certain Considerations in Pneumonia in Children" by Dr. Walter H. Levy. On Tuesday, February 6, "Diagnosis and Treatment of Endocrine Conditions in Infants and Children" by Dr. Murray B. Gordon, professor clinical pediatrics at the Long Island College of Medicine. On Wednesday, February 14, "Lobar Pneumonia" by Dr. Russell L. Cecil, professor of internal medicine at the New York Polyclinic Medical School and Hospital. On Friday, February 23, "Atelectasis as a Common Post-Operative Condition" by Dr. James S. Edlin.

Basic Science Laws—A List of Articles and Reports Which Have Been Printed in California and Western Medicine.

—In an editorial printed in this issue of CALIFORNIA AND WESTERN MEDICINE, mention is made of articles which have been printed in this JOURNAL on the subject of basic science laws. The following references give the issues in which those reports appeared:*

Vol. XXXII, No. 4, April 1930, page 288. One hundred and eighty-sixth meeting of the Council. Item 30. Medical Practice Act and Basic Science Act.

Vol. XXXII, No. 6, June 1930, page 430. Report of Special Committee on Revision of Medical Practice Act and of a Possible Basic Science Act.

Vol. XXXIV, No. 6, June 1931, page 448. Report of Special Committee on California Medical Practice Act and on a Proposed Qualifying Certificate (So-Called Basic Science) Law.

Vol. XXXV, No. 3, September 1931, page 228. Editorial.

Vol. XXXV, No. 3, September 1931, page 239. Miscellany.

Vol. XXXVI, No. 2, February 1932, page 128. Report of Special Committee on Medical Practice Act and on Qualifying Certificate Law.

Vol. XXXVI, No. 6, June 1932, page 439. Report of Special Committee on California Medical Practice Act and on a Qualifying Certificate (So-Called Basic Science) Law.

* For editorial comments, see page 194.

Pediatric Section of the Los Angeles County Medical Association.—The Pediatric Section of the Los Angeles County Medical Association was organized Wednesday, January 10, 1934. The following officers were elected: President, Dr. William M. Happ; vice-president, Dr. Montague Cleaves; secretary, Dr. William Sidney Bowers; councilor, Dr. Joseph R. Shuman. Any member of the Los Angeles County Medical Association, in good standing, who is interested in any phase of child welfare or child health who wishes to join this section may make application to the secretary.

American Board of Ophthalmology.—Dr. William H. Wilder of the American Board of Ophthalmology is interested in holding an examination for the certificate of the American Board at either San Francisco or Los Angeles after the examination in Butte on July 16. If thirty applicants can be obtained from the coast region such an examination will be given, and whether it will be at Los Angeles or San Francisco will depend upon which community has a preponderance of applicants. In order that the plans of the board may be made immediately, Doctor Wilder is anxious that any who contemplate the examination on the Coast, get in touch with him immediately at 122 South Michigan Boulevard, Chicago, Illinois.

Woman Slayer Ruled Insane.—Mrs. Ida Mae Rhoades, 59-year-old Los Angeles clubwoman, was committed to the California State Hospital for the Insane at Mendocino by Superior Judge Doran as a result of the fatal shooting of her personal physician, Dr. George G. Hunter, on December 9, 1933.

Judge Doran made the order after hearing the testimony of three alienists, all of whom pronounced the woman insane.

The only prosecution evidence introduced during the hearing was the dying declaration of Doctor Hunter, who stated that Mrs. Rhoades had shot him and that he did not believe she was responsible for her act.

The alienists all agreed that Mrs. Rhoades is suffering from delusions of persecution.

Doctor Hunter was shot down in Mrs. Rhoades's home at 1657 Fifth Avenue while making a professional call upon the woman, who had been suffering from a nervous disorder.

States Ban Parrakeet Shipments.—The states of Connecticut, Minnesota, Oregon, and the Territory of Hawaii have prohibited the importation of parrakeets because cases of psittacosis have occurred in individuals who have purchased imported birds. The state of Connecticut has gone farther and prohibits the buying, selling or transport within the state of birds belonging to that branch of the psittacine family known as parrakeets, or love birds.

Following is a copy of the executive order issued to health officers of Connecticut relative to this subject:

"The Public Health Council, at its meeting on Thursday, December 28, voted to add the following regulation to the Sanitary Code. This regulation will be regulation 49 and reads as follows:

'No person, firm or corporation shall buy, sell or transport within the state of Connecticut, birds belonging to that branch of the psittacine family known as parrakeets or love birds.'

"The above regulation was passed because of the increase of psittacosis occurring in persons residing in Connecticut, who purchased these infected birds and took them to their homes. The fatality rate of this disease is high, and because of the ease of transmission and its virulence, psittacosis is recognized as one of the most dangerous of diseases. Regulations up to the present time have not prevented the spread of this disease from birds that have come to Connecticut.

"Will you kindly inform the managers or owners that sell birds in your town or city so they will be warned

about this regulation which is to take effect January 15, 1934. It has been found that these birds are sometimes sold not only in regular bird stores, but in some department stores and others."

Exhibit on James Blake, M. D.—The University of California Medical School Library, San Francisco, has an interesting current exhibit on display relating to James Blake, M. D. (1815-1893), who was probably California's first great scientist. After a brilliant career in London as a physiologist, Blake came to St. Louis in 1847 and in the Gold Rush in 1849 to Sacramento. His early scientific work was on the relationship between chemical constitution and physiological action with special reference to inorganic salts, in which Blake showed that the characteristic action was determined largely by the electropositive element, that toxicity increased with the atomic weight of the electropositive element, and that the elements could be arranged on the basis of their physiological action in a table which corresponds closely to the well-known Periodic Table developed years later by Mendeléeff. In California, Blake turned to clinical problems, writing on infectious diseases, and especially on the open-air rest treatment of tuberculosis. In 1862 Blake came to San Francisco to edit the *Pacific Medical and Surgical Journal*, and later became professor of midwifery at the University of California Medical School, and helped found the California Academy of Science. He contributed materially to the geological, zoölogical, anthropological, and meteorological knowledge of the state. In 1876 he retired to the Mount St. Helena region, where he established a sanatorium for the treatment of tuberculosis. Later, Blake moved to Middleton, where he returned to the scientific interests of his earlier career, and from which place he reported many of his important observations in London and Paris. Practically unrecognized in California, especially by the medical profession, he and his work were well known and accredited abroad. The exhibit contains material and pictures relating to all stages of his career.

Industrial Accident Commission.—The peak year of the Commission since its organization was reached when 6,376 original applications were filed during the calendar year of 1933. Out of this total the Commission decided 6,064 original claims, and all parties concerned should feel greatly satisfied with the work done, when it is realized the Commission is understaffed.

In addition to the increased number of applications filed, the Commission has had the added burden of trying to salvage something from the assets of a number of insurance carriers who went into the hands of receivers, so that injured employees may recover something upon the awards made against these defunct companies.

The Commission, during its years of existence, in endeavoring to carry out the intendment of the legislature, *i. e.*, to create and enforce a complete system of workmen's compensation, has adopted the policy of setting hearings as near as possible to the residence of the injured employee. This is done so that the injured man will not be put to the expense and physical annoyance of coming to the Commission offices, either in Los Angeles or San Francisco.

If the authorities in the communities in which these hearings are set only realize that the Commission is doing this as a convenience for local residents, they surely will be more coöperative in the future in providing the Commission with suitable quarters in which to hold these hearings. If these local authorities in the future continue to embarrass the Commission by failure to coöperate, it will be necessary to bring injured employees and their attorneys either to the San Francisco or Los Angeles offices of the Commission, and it is evident this will prove a very great hardship to the injured men.

California Tuberculosis Association Meeting.—The annual meeting of the California Tuberculosis Association will be held at the Hotel Californian, Fresno, on April 5, 6, and 7. The following program is planned.

THURSDAY, APRIL 5

8:00 p.m.—*Public Meeting*—Tuberculosis and Public Health. Iago Galdston, Director Public Relations, New York Academy of Medicine.

FRIDAY, APRIL 6

9:30 a.m.—*Joint Session—Clinical and Sociological Sections.*

Status of Tuberculosis Control in California. William P. Shepard, M. D.

Building Programs on Appraised Needs. Iago Galdston, M. D.

Administrative Problems in Case Findings.

(a) Routine Tuberculin Testing of School Children with X-Ray Pictures of Positive Reactors. Paul H. Barrett, M. D.

(b) Routine Examination by Classic Case Methods. E. P. Von Allmen.

2:00 p.m.—*Clinical Section*—Symposium on Childhood and Adolescent Tuberculosis.

Nineteen Thirty-Four Aspects of the Problem. Chesley Bush, M. D.

Radiological Aspects. Rolla G. Karshner, M. D.

The Viewpoint of the Pediatrician. Francis S. Smyth, M. D.

2:00 p.m.—*Sociological Section*

State Organization for Tuberculosis Control. Rev. W. R. H. Hodgkins.

Flexible Programs for Local Associations. Miss Lucile Jones.

Community Resources in Tuberculosis Control.

(a) Coöperating Agencies. Miss Marguerite Holdzkom.

(b) Public Relations. Mrs. Myra Mackay.

7:00 p.m.—Annual Banquet.

SATURDAY, APRIL 7

9:30 a.m.—*Clinical Section*

Radiological Studies of Interlobar Infiltrations. Joseph Levitin, M. D.

Apical Thoracoplasty. Frank S. Dolley, M. D.

What the Clinician Should Expect from Various Surgical Procedures in Pulmonary Tuberculosis. Sidney Shipman, M. D.

9:30 a.m.—*Sociological Section.*

Health Education in Elementary and Secondary Schools. Herbert Stoltz, M. D.

Effectiveness of Hygiene Programs in Colleges and Universities. Thomas S. Storey, M. D.

Proposed Health Curriculum for California. Vierling Kersey, Superintendent Public Instruction.

2:30 p.m.—*Clinical Section*—X-Ray Symposium.

2:30 p.m.—*Sociological Section*—Round-table discussion of nursing problems.

The officers of the association are: President, R. L. Cunningham, M. D., of Los Angeles; vice-president, Mrs. Francis H. Mead of San Diego; secretary, Fontaine Johnson of Sacramento; treasurer, A. J. Cruickshank of Santa Ana.

Directors—Chesley Bush, M. D., of Livermore, Rev. W. R. H. Hodgkin of Berkeley, F. M. Pottenger, M. D., of Monrovia, W. C. Voorsanger, M. D., of San Francisco, Mrs. H. Page Warden of Pasadena.

Executive Secretary—William Ford Higby of San Francisco.

Program Committee—Carl R. Howson, M. D. (chairman) of Los Angeles, Robert A. Peers, M. D., of Colfax, Mr. Neiman of San Francisco.

Local Committee on Arrangements—Everett Morris, M. D. (chairman), Fresno.

Dr. Lewis Hackett of the Rockefeller Foundation, who is in charge of malaria studies in Italy and the Near East, spoke to the faculty and students on Wednesday, February 7, in Toland Hall, University of California Hospital, San Francisco, on "New Light on Old Problems in Malaria."

Training Course for Health Officers Announced.—

The University of California in its Intercession and Summer Session of 1934 will offer twelve weeks of intensive training for health officers. The session opens May 14 and closes August 3. The course is open to any person with the degree of doctor of medicine, but because of the nature of the work the class will be limited in number.

The first six weeks of the course will be conducted in Berkeley under the general direction of Dr. F. L. Kelly, and will consist of class instruction, group discussions and field demonstrations. The next four weeks will be spent in the San Joaquin County Health Unit. During this period each student will receive practical field experience under the supervision of Dr. John Sippy. In the last two weeks each student will be required to make a survey of the health work in a community near enough to Berkeley so that frequent conferences can be held with the faculty members.

The course will not carry university credit, but a certificate of attendance will be issued to those completing it in a satisfactory manner. The regular fees of the Intercession and Summer Session of \$35 for each session will be charged. Room and board for the six weeks' session in Berkeley can be obtained from \$40 up. No laboratory fees will be charged.

Applications for admission should be sent to the Chairman, Department of Hygiene, University of California, Berkeley, and should be accompanied by a statement of professional training and of experience. Those wishing to attend should make application as early as possible.

The subjects covered will be Public Health Administration, Vital Statistics, Epidemiology, Communicable Disease, Child Hygiene, Parasitology and the Integration of Public Health Nursing, the Public Health Laboratory and Sanitary Engineering with the public health program.

INSTRUCTIONAL STAFF

Dr. H. C. Bush, director of Arroyo Sanatorium.

Dr. J. N. Force, professor of epidemiology.

Dr. J. C. Geiger, Director of Public Health, City and County of San Francisco.

C. G. Gillespie, Chief of the Bureau of Sanitary Engineering, State Department of Public Health.

H. F. Gray, Director of the Alameda County Mosquito Abatement District.

W. B. Herms, Professor of Parasitology.

C. G. Hyde, Professor of Sanitary Engineering.

Dr. W. H. Kellogg, Associate Clinical Professor of Preventive Medicine, and Chief of the Bureau of Laboratories, State Department of Public Health.

Dr. F. L. Kelly, Assistant Professor of Public Health Administration, and Health Officer, City of Berkeley. Eschscholtzia L. Lucia, Assistant Professor of Biometry.

Dr. K. F. Meyer, Professor of Bacteriology, and Director of the Hooper Foundation.

Dr. Howard Morrow, Clinical Professor of Dermatology, and President State Board of Public Health.

Dr. E. L. Munson, Lecturer in Preventive Medicine and Public Health.

Dr. R. L. Porter, Dean of the Medical School and Professor of Medicine.

Dr. W. P. Shepard, Assistant Secretary, Metropolitan Life Insurance Company.

Dr. J. Sippy, Director of the San Joaquin County Health Unit.

Dr. Ellen S. Stadtmuller, Chief of the Bureau of Child Hygiene, State Department of Public Health.

Miss Ida M. Stevens, Supervising Morbidity Statistician, State Department of Public Health.

Dr. H. R. Stolz, Director of the Institute of Child Welfare, and Director of Health and Physical Education, Oakland Public Schools.

Western Branch Society of the American Urological Association.—The Western Branch Society of the American Urological Association is preparing an extremely attractive program for its Los Angeles meeting, to be held at the Hotel Ambassador, April 27, 28, and 29. In addition to papers by members, there will be a number of prominent eastern and southern urologists among the essayists who will present formal papers as well as give clinics on such subjects as renal tumor, calculus, obstruction of the upper urinary tract, urogenital neuroses, prostatic resection, nonoperative removal of kidney stones, and many other pertinent subjects. There will be wet clinics and clinical demonstrations of important new urological apparatus.

The Western Branch Society is noted not only for the scientific value of its papers and discussions, but also for its well-planned social diversions, which, important as they are, do not interfere with the scientific session. The Western Branch Society includes the states of Arizona, California, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming; also Alaska, Western Canada, Hawaii, and the Philippine Islands. All scientific sessions are open to members and qualified medical men, who are invited and urged to be present. There will be a commercial exhibit which will show the best of the new appliances of urological interest.

The meeting will be followed by that of the California Medical Association at Riverside on April 30 to May 1, 2, and 3. The urological papers of this meeting will be presented on April 30 and May 1. An unusual opportunity is thus afforded for five days of continuous postgraduate study. Make your plans to attend.

Reservations may be made through the secretary, George W. Hartman, 999 Sutter Street, San Francisco.

Exploding a Myth.—Quoting from the bulletin of the Office of Education, United States Department of the Interior:

"A modern myth that has received wide acceptance is exploded by Dr. David Segal in the current issue of *School Life*, official monthly journal of the Federal Office of Education. . . . 'The statement that the intelligence of the adults of this country was about that of twelve-year-olds came about through a misinterpretation of the data obtained from the intelligence testing carried out in the Army during the World War,' he points out. 'There are several factors at work which brought about this misinterpretation. The mental ages obtained on the intelligence tests used in the Army were based on equivalent mental ages found on the individual Binet intelligence test. This Binet test, however, underrates adult intelligence. . . .'

"'The word intelligence,' points out the Office of Education expert, 'is very loosely used. To the scientist it does not mean the total, collective knowledge, experience and judgment of an individual. It means, in other words, the speed of mental reaction to a new situation, his capacity to grow mentally. . . . ' Doctor Segal estimates that there are 10,000,000 Americans in the highest mental age group, that is, twenty-three years and up. There are probably 40,000,000 above the average intelligence level of 17.7 years for the adult group sixteen to fifty years of age (chronological). Only 3,000,000 adults have a mental age of twelve years or less. 'The adult population,' he declares, 'has an adult intelligence and not a childish intelligence. Comprehension of this fact should be of importance to those in charge of the radio, newspapers, and motion pictures. In many instances the myth that the men and women of the United States have an intelligence of twelve-year-olds has been used as an argument for lowering the educational or cultural level of newspapers, magazines, movies, and radio presentations. Educators should do their best to counteract all forms of propaganda which use this false premise.' "

CORRESPONDENCE

Subject of following letter: Special railroad rates to Riverside convention.*

February 17, 1934.

Dr. Emma W. Pope,
Secretary, California Medical Association,
Four Fifty Sutter Street,
San Francisco, California.

State Convention California Medical Association,
Riverside, April 30 to May 3, 1934:

Dear Doctor:—Your recent inquiry regarding special round-trip fares on above account.

For your convention the various interested rail lines have authorized me to advise you that special round-trip convention fares will be authorized on the identification certificate plan on basis of 85 per cent of the regular first-class one-way fare for the round-trip with minimum adult round-trip fare of \$1.00

The special round-trip convention fares will apply from all points in California except from points on the Westwood and Alturas lines of the Southern Pacific in Modoc, Plumas, and Lassen counties.

From points in California on Westwood and Alturas lines of the Southern Pacific Company the lowest available round-trip fares will be the twenty-one-day winter round-trip fares, which are on the basis of one regular first-class fare and one-tenth of fares in effect on November 30, 1933. Examples of the various fares to Riverside are shown below:

From San Francisco

First class, one way, \$15.95.

Twenty-one-day regular round-trip fare, \$21.10.

Special round-trip convention fare, \$13.60.

From Sacramento

First class, one way, \$15.30.

Twenty-one-day regular round-trip fare, \$20.20.

Special round-trip convention fare, \$13.

From Alturas

First class, one way, \$26.21.

Twenty-one-day regular round-trip fare, \$34.65.

Special round-trip convention fare (use twenty-one-day fare).

Round-trip convention fares will be available only for members of your organization and dependent members of their families on presentation and surrender to railroad agent of an official identification certificate.

If you will advise the number of certificates required we shall arrange to mimeograph a supply without charge to your organization. Certificates should be furnished to all delegates with names of those to whom furnished, entered thereon with pen and ink (or typewriter). There is no minimum requirement under the identification-certificate plan. The sale dates for tickets on the identification plan from all points in California not involving an interstate trip will be April 26 to May 3, inclusive, with return limit of May 7, 1934.

Yours truly,

(Signed) G. C. HURLESS,
Agent, Southern Pacific Company.

Subject of following letter: Report on a solicitor for gown and smock orders.

To the Editor:—I wish to call your attention to the recent solicitation of physicians by a man named R. H. Thomas, who is taking orders for gowns and smocks used by doctors and nurses.

Last fall this man called at our office showing styles and samples. He took measurements, and a down pay-

* See also editorial comment in this issue, page 196.

ment was made on the order. In due time the order arrived, but the stuff was not what we ordered, not a single item being correct in color, style or material. We had, however, accepted the package, and paid the C. O. D. for the balance.

We wrote the Hoover Company and called their attention to the error and asked for instructions as to returning the goods and the return of our money. In reply they sent samples and asked us to reorder. This we refused to do and asked for return of our money. They did not send back the initial deposit, but referred me to their agent. I wrote the agent and he has so far ignored the letter.

Of the sales made in San Bernardino, everyone, so far as I have been able to learn from conversation with other doctors, not one received the goods as ordered nor has proper adjustment been made, or where the goods were returned, in not one instance has the agent returned the initial deposit. I have asked one of the doctors to write out his experience with this outfit, and am enclosing it herewith.

If you will give this fraud some publicity, I believe some other overtrusting doctors may save their money from these crooks.

303 Professional Building, San Bernardino.

Very truly,
CHARLES A. WYLIE, M. D.

P. S.—One of the letters from the Hoover Company is attached.

1 1 1
December 18, 1933.

Dear Doctor Wylie:—Replying to your letter of the 12th inst., please be advised that the amount which you paid to the agent on your order was retained by him as his commission. It is, therefore, necessary for you to communicate with him for a refund of it.

We suggest that you get in touch with the agent at the following address for a return of your deposit: Mr. Roy H. Thomas, c/o Y. M. C. A., Sacramento, California.

251 West Nineteenth Street, New York.

Yours very sincerely,
HOOVER MANUFACTURING AND SALES CO., INC.
Art Berger, General Manager.

NRA member. We do our part.

DOCTORS PLAN HEALTH UNITS
TO END FAKES *

"Aroused by the exploitation of their profession and their patients by laymen racketeers, some five thousand doctors of the state are preparing to band themselves together in hospital insurance units and render direct service without profit to the middle man.

"While there have been sporadic moves in this direction in some localities, the chaos created by wholesale depredations of unscrupulous health and accident associations has determined physicians generally to take affairs into their own hands, it was learned yesterday.

1 1 1
LAUDS WARREN ACTION

"The California Medical Association, with its state-wide membership, is vitally interested in the action taken by the Grand Jury and District Attorney Earl Warren of Alameda County to end exploitation of the people by certain hospital and health organizations," said Dr. T. Henshaw Kelly, chairman of the Council of the Association.

* Reprinted from the San Francisco Chronicle, February 23, 1934. See editorial comment in this issue, page 196.

"This Association insists, as the courts of the state have repeatedly held, that medical service can be furnished only by doctors of medicine, and that no corporation or lay organizations or persons can intervene between the ill patient and the physician of his choice.

"Use of the sick man and his doctor by corporations or other like organizations to extract a profit for themselves from others' suffering and service is repugnant, and misguided efforts to legalize such practices under the guise of regulation have been quite properly ignored by the Legislature.

NEW SYSTEM INVOLVED

"The Association has realized for some time the desirability of providing a means by which many people can pay for their hospital and medical care by pooling periodic payments during health, and it has, by sustained and careful work and study, evolved methods to accomplish these ends without injury to the standards of the service to be rendered.

"The county medical societies of the Association in San Francisco, Alameda, Santa Clara, Ventura, Sacramento, San Diego and other counties are studying and formulating plans by which, in coöperation with the hospitals in these counties, hospitalization will be made available in the above manner at no other cost than the proper hospital charges and minimum administrative costs.

"It is the desire of the physicians in these counties, upon the successful operation of the hospitalization plan, to then develop and offer plans by which they will render medical service without the intervention of any corporate or lay body and at a cost covering only administrative charges and very reasonable fees paid the physician chosen by the participating members to care for them in sickness.

WAIT LAW CHANGES

"As soon as the application of existing laws to these plans is clarified, the Alameda County Medical Association, with affiliated hospitals and other county societies, is prepared to proceed with hospitalization service."

1 1 1

"In Sacramento yesterday the files of the State Board of Medical Examiners revealed some of the methods used by agents for racketeering health insurance concerns in selling contracts. One set of records contained sucker lists, in which all prominent or moderately wealthy persons in a central California city were 'pegged.'

"Here are a few samples:

"Mrs. Ruth ——. Husband in Denmark. Lots of money, believe it or not. Nuts on flowers and dogs."

"James —, carpenter, Scotch, dumb, plenty dry."

"H. C. —, grocer, Protestant, very dry. Give him plenty of baloney."

"— —, Sheriff. Thinks he is pretty big, but is dumb." . . .

Iron Metabolism in Anemia.—According to the observation of Snelling, the results of studies of iron balance and pigment excretion in a series of seven premature infants tend to establish certain features of this condition and lead to possible explanations of the disorder. Premature infants tend to have a positive iron balance when fed according to the method commonly employed. The pigment excretion is not excessive. The anemia affects the red blood cells and hemoglobin equally, develops in spite of treatment, and improves spontaneously. The anemia appears to be due to a failure to utilize the available supplies rather than to a lack of the substances that compose hemoglobin. An etiologic hypothesis which would explain many of the observed phenomena portrays failure of utilization of the substances that compose hemoglobin due to inadequate medullary space coincident with the premature cessation of hematopoietic activity in the liver.—*Journal of Pediatrics*, May, 1933.

TWENTY-FIVE YEARS AGO*

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. VII. No. 12, March 1909

From Some Editorial Notes.

County Secretaries.—A good many County Medical Society secretaries do not seem to realize the importance of their position. On the county secretary really depends the whole success or failure of the county society, and on the county society is founded the whole structure of medical organization—the State Society and the American Medical Association. The good that these organizations are doing in California and in the whole United States is incalculable. . . .

From an article on "The Faucial Tonsils Considered from a Medical and Surgical Standpoint" by Louis C. Deane, M.D., San Francisco.

. . . Treat the subject as lightly as you will, nevertheless the prominent position of the faucial tonsils at the orifice of the respiratory and alimentary tracts, their exposed position to foreign substances, their close relation to the cervical lymphatics and their great vascularity gives them an importance not easily ignored. One remarkable feature is that these organs so ready of access and so easily observed have remained a kind of medical enigma. . . .

From an article on "The Leukemias and Allied Diseases" by Henry Harris, M.D., San Francisco.

It is my purpose to consider a group of diseases not very often encountered but one of peculiar interest, both from the pathological and the clinical standpoint. The etiology of this group is still a matter of doubt, though more and more observers are granting the point that we are dealing with clinical malignancy and possibly pathological malignancy. . . .

From an article on "The Influence of Climate Upon Tuberculosis—With Remarks on the Climate of Colfax, California," by Robert A. Peers, M.D., Colfax.

Mr. Chairman and Gentlemen: Your chairman of the Committee of Arrangements, Dr. Philip King Brown, suggested that, in addressing you on the subject of tuberculosis, I refer to our Colfax climate in such cases. . . .

* A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of CALIFORNIA AND WESTERN MEDICINE. The column is one of the regular features of the Miscellaneous Department of CALIFORNIA AND WESTERN MEDICINE, and its page number will be found on the front cover index.

Sodium Salicylate and Magnesium in Treatment of Rheumatic Fever and Arthritis.—The studies of Foxe indicate that doses of 90 grains (6 grams) a day of sodium salicylate when combined with 60 grains (4 grams) of magnesium oxid give results in acute infectious arthritis and rheumatic fever equivalent to those obtained when doses of 150 grains (10 grams) of sodium salicylate, given with 150 grains of sodium bicarbonate, are used. However, this does not necessarily mean that the combined drug (magnecylate) is a grain-for-grain equivalent therapeutically to sodium salicylate. Equivalence or nonequivalence of such effects will only be known when physicians have decided on the minimal effective dose of salicylate. The toxic effect of salicylates, combined with either magnesium oxid or sodium bicarbonate, is minimal. In this study only moderate doses were employed, and cases with cardiac complications were excluded.—*West Virginia Medical Journal*, May, 1933.

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA*

By CHARLES B. PINKHAM, M. D.
Secretary-Treasurer

News Items

On February 3, 1934, Governor Rolph appointed George Thomason, M. D., member of the Board of Medical Examiners, for a term ending January 15, 1938, vice Charles T. Sturgeon, M. D., resigned.

The always active Earl Warren, District Attorney of Alameda County, with Guard Darrah, District Attorney of San Joaquin County, members of the San Francisco Police Department, and the Special Agent of the Board of Medical Examiners, joined in an active campaign against the hospital association "racket," and recently raided the San Francisco office of Harry Kramer, who, according to the records of the Board of Medical Examiners, is said to operate about six of these so-called hospital associations, concerning which numerous complaints regarding alleged irregularities have come to the Board of Medical Examiners, as well as the State Insurance Commissioner. Harry Kramer and his associate, Harry Blank, also known as Harry Blankenstein, are reported held under heavy cash bail in Alameda County. Other "salesmen" connected with this outfit, against whom warrants were issued, are said to be E. L. Knotts, C. H. Wolf, and V. A. Klingberg. Reports relate that Kramer's books showed \$70,000 representing the premiums on contracts sold, whereas his bank account on the date of the raid was said to show \$140 on hand. He is reported to maintain an office at 600 Roosevelt Building, Los Angeles.

The "International Metropolitan Health and Accident Association," listed as one of the many so-called "hospital associations," formerly located in the Loew-Warfield Building, San Francisco, and later said to have moved to 127 Montgomery Street, assertedly managed by John C. Moore, was recently featured in the newspapers through the reported arrest in Stockton of Max Pinsley, Scott Corlis, alias J. W. Ewing, E. L. Knotts and M. J. Griffin. The records show that on January 15, 1934, Max Pinsley pleaded guilty in the Superior Court of Oakland to one count of grand theft and was sentenced to San Quentin prison for a period of one to ten years, which no doubt will result in the dismissal of the charge pending against him in Stockton.

Well equipped with professional cards on which were printed the names of various licensed physicians in several states, used by him in masquerading as a reputable physician, Earl George Harris, said to be a former attorney of Buffalo, New York, was on February 4, 1934, reported arrested at the Mark Hopkins Hotel, San Francisco, for issuing bad checks. In his possession was found an assortment of checks on which he had printed the names and addresses of physicians licensed in other states and also innumerable blank cards, some bearing the name of the "American College of Surgeons" and another lot bearing the name of the "American Medical Society," many of which Harris had assertedly filled in under his various aliases, to be used in furtherance of his bad check scheme.

When Peter Linart, alias Peter Linard, alias Peter Zuborsky, was arrested in San Francisco on an asserted charge of stealing twenty-one microscopes from

* The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.

(Continued in front advertising section, Page 12)

CANYON SANATORIUM

REDWOOD CITY, CALIFORNIA

An Open Air Sanatorium for
the Treatment of Tuberculosis
and Diseases of the Chest.



NESTLED IN THE FOOTHILLS

For booklet giving full particulars write RALPH B. SCHEIER, M. D., Medical Director

San Francisco Office: 516 SUTTER STREET Telephone DOUGLAS 4486

(Continued from front advertising section, Page 31)
even after a very small amount of treatment to render the patient non-infectious although he himself may continue to harbor the infection. Thus the importance of getting cases under treatment early cannot be over-emphasized.

In conclusion, Doctor Parran expressed the belief that the next twenty-five years of service in the control of syphilis may be even more significant to this State than has been the record of the past twenty-five years in the control of tuberculosis.—*Health News*.

Two American Presidents Who Had Cancer.*—

Unlike many diseases which are most serious among underprivileged persons, cancer is a malady that plays no favorites. It may attack the high as well as the low, the rich as well as the poor, and the celebrated as well as the obscure. It has, in fact, caused the deaths of emperors and kings, scientists and artists, and many other important personages.

Among the famous persons who have been afflicted with malignant diseases have been two Presidents of the United States. One of them succumbed to cancer after finishing his term of office; the other was operated on for cancer while in the Presidency, but he survived. Delay in diagnosis may have contributed to the misfortune of the one, whereas prompt action in the discovery and treatment of the condition undoubtedly saved the life of the other at a time when his country greatly needed his services.

In 1884, seven years after he had left the Presidency, Ulysses S. Grant began to have severe pains in his throat. In September a prominent physician examined the former President at his summer home at Long Branch and advised that he consult a specialist at once. If ex-President Grant had followed

this advice immediately, he might have been spared much future suffering.

A month or more elapsed before the ex-President went to a throat specialist, who diagnosed the condition as probably cancerous. Another delay occurred, however, and it was not until the following January that a specimen taken from the tissues of the diseased throat was sent to a competent pathologist for a laboratory examination. The pathologist performed what is known as a biopsy and, without knowing the identity of the patient, he pronounced it cancer.

About this time, Grant had begun work on his "Personal Memoirs," in accordance with an arrangement with the editor of the *Century Magazine*. For a time he set aside this task, as his condition grew steadily worse; but he soon renewed it with increased vigor and wrote steadily almost to the day of his death.

General Grant proved himself a good soldier during his long siege of illness. His associate, General Adam Badeau, wrote several months later in the *Century Magazine*: "He carefully attended to every injunction, and sustained the long siege of disease with the same determination and tenacity he had displayed in other sieges and campaigns with other enemies. But now he was on the defensive—it was the first time."

On June 16, 1885, the ex-President was taken to a cottage at Mount McGregor. Here he continued to write, although he was suffering constant pain. The malignant condition had progressed too far to permit a cure, although skillful medical and surgical attention was given by a number of eminent specialists.

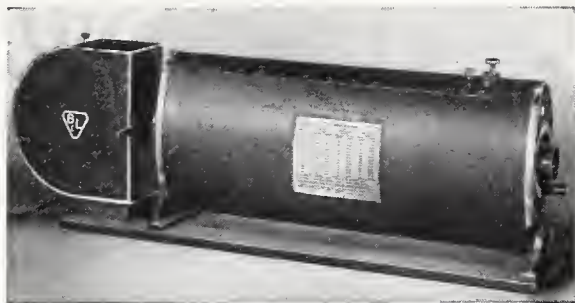
The fortitude displayed by General Grant in this affliction, which he realized was hopeless, should inspire all who suffer from cancer.

The battle proved a losing one and the eighteenth President of the United States died quietly, July 23, 1885.

* By James A. Tobey, Dr. P.H.

Reprinted in part from *Hygeia*, June, 1933.

(Continued on Next Page)



THE NEW
BAUSCH & LOMB
CLASON
Visual Acuity Meter
Is 1934 in Every Respect

In addition to being the **ONLY** visual acuity instrument which affords a gradual change of letter sizes from invisibility to the desired size, the New Clason incorporates

THE PATENTED HAMILTON SLIDE WITH ASTIGMATIC
DIAL MANIPULATION NEVER BEFORE AVAILABLE

The original Duo-Chrome Red Green Check Test makes
possible precise refractions to $\frac{1}{8}$ D in sphere or cylinder.

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COMMERCIAL

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INCORPORATED FEBRUARY 10TH, 1868

*One of the Oldest Banks in California, the Assets of which have never
been increased by mergers or consolidations with other Banks.*

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526 California Street, San Francisco, Cal.

December 30th, 1933

Assets.....\$159,104,590.29
Capital, Surplus and Reserves.....\$6,650,000.00

The following accounts stand on our Books at \$1.00 each, viz.:

Bank Premises and Equipment - (Present Value \$2,073,413.00)
Other Real Estate - - - - (Present Value \$635,650.00)
Pension Fund - - - - - (Present Value \$721,847.18)

MISSION BRANCH.....Mission and 21st Streets
PARK-PRESIDIO BRANCH.....Clement St. and 7th Ave.
HAIGHT STREET BRANCH.....Haight and Belvedere Streets
WEST PORTAL BRANCH.....West Portal Ave. and Ulloa St.

(Continued from Preceding Page)

Eight years after the death of General Grant and about three months after his second inauguration as President, Grover Cleveland noticed an ulcerated patch in his mouth. He sent at once for an army surgeon, Dr. R. M. O'Reilly, who afterward became Surgeon-General of the army. He made a careful examination and immediately suspected a malignant condition.

There was no delay in this case. A specimen of the diseased tissue was sent at once to an army pathologist. After a suitable examination, without knowing who was the patient, this pathologist submitted a re-

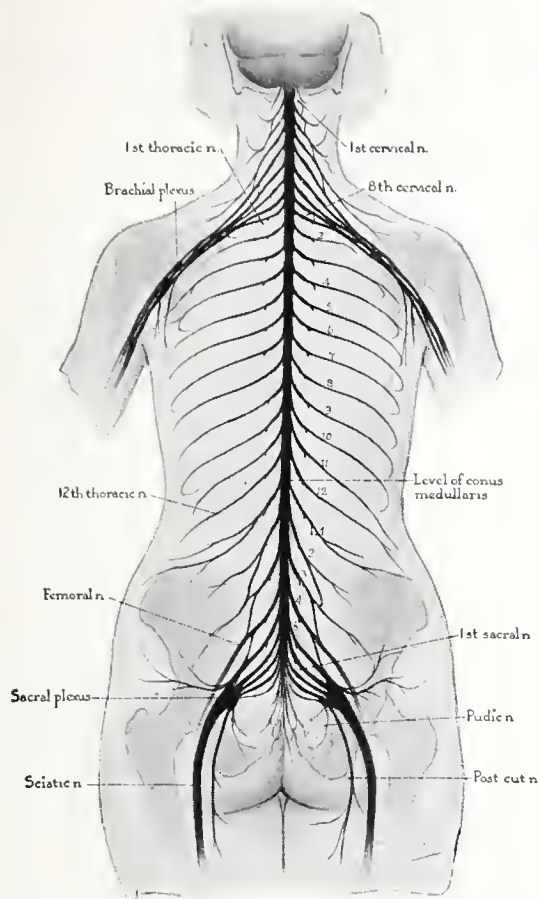
port that the condition was cancer. Doctor O'Reilly called in consultants, who advised an immediate operation for the complete removal of the malignant tumor.

The President consented to this operation, but only on condition that it would be kept a secret in order that the public might not be alarmed. During this period the country was suffering a financial depression, not unlike that of the present time, and Congress had been called into special session to repeal a free-silver law. Vice-President Stevenson was a free-silver proponent, and it would have been particularly unfortunate if anything had happened to Cleveland then.

The operation was performed in a dramatic way, and the details of it were not revealed until twenty-five years later when Dr. W. W. Keen, one of those present, described it in a magazine article. On June 30, 1893, the President boarded a private yacht in New

York harbor, and the boat then steamed up the East River into Long Island Sound. The President was accompanied by Drs. O'Reilly and Keen, Dr. Joseph Bryant (his personal physician), and Dr. Bryant's assistant, Dr. John F. Erdmann, and also by Dr. E. G. Janeway and Dr. Ferdinand Hasbrouck, a dentist.

After Doctor Hasbrouck had extracted two teeth, Doctor O'Reilly administered the anesthetic, and Doctor Bryant, aided by Doctors Keen and Erdmann, excised the diseased tissue. The operation was done entirely within the mouth, with the help of a cheek extractor which Doctor Keen had brought back from



ANATOMICAL STUDY

of the

DISTRIBUTION OF SPINAL NERVES

—POSTERIOR VIEW

A set of Anatomical Studies in book form furnished to physicians on request—upon receipt of 20c to cover mailing costs.

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JACKSON, MICHIGAN

Chicago New York London
1056 Merchandise Mart 330 Fifth Ave. 252 Regent St. W.
S. H. CAMP & CO. of CANADA, Ltd., Windsor, Ont., Can.



a trip to Paris in 1866. This method prevented any external scars.

When the yacht arrived at Buzzard's Bay on July 5, President Cleveland walked ashore unassisted. About two weeks later, a second operation was performed by Doctor Bryant in order to remove some additional tissue, and shortly afterward a prominent New York dentist, Dr. K. C. Gibson, fitted the President with an artificial jaw made of vulcanized rubber. No impairment of speech resulted, and no one except the participants knew that these operations had been conducted.

By his promptness, President Cleveland unquestionably saved his life, for he lived another fifteen years. After leaving the Presidency he retired to Princeton, New Jersey, where he died in 1908 at the age of 71.

These two episodes from American history offer an important lesson. Science has not yet discovered the cause of cancer, but all students of the cancer problem are agreed that the major forms of the disease can be cured if the danger signals are heeded and if the disease is promptly diagnosed and treated at once by competent methods. In most instances a surgical operation is necessary, but in some cases irradiation with radium or the x-rays proves efficacious. This is a matter for the doctor to decide.

When symptoms occur it is the part of wisdom to consult a capable practitioner of regular medicine at once, without fear or undue excitement. The condition may not be dangerous, but it pays to find out about it. Delay always means trouble if cancerous or precancerous conditions are present.

President Cleveland's life was saved because he was sensible about his affliction. President Grant's life might have been saved if he had been more prompt in his action. Thousands of other lives could be saved by the practical application of the vitally important slogan, "Fight Cancer Early."—*Bulletin of the American Society for the Control of Cancer.*



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Belmont, California

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22 miles from San Francisco—Situated in the beautiful foothills of Belmont, on Half Moon Bay Boulevard. The grounds consist of seven acres studded with live oaks and blooming shrubbery.

Just the place for the overworked, nervous and convalescent. Number of patients limited. Physician in attendance.

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"Some may wish you Peace and Ease
A smoother path in the year ahead.
We wish you Fiber the Valiant need
To force your way through bitter blasts;
We wish you the heart of the Fighting Breed
To carry you on while the battle lasts."

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Mental Diseases, Selected Alcoholic
and Drug Addiction Cases*

Patients referred to us by attending physicians
remain in their care, except under their ex-
pressed wish to the contrary. Out of town doc-
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San Francisco California
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Is Malnutrition Increasing? — Much has been said and written regarding the effect of the depression on present-day health. Health standards for the past three years have been generally maintained, and this condition has been attributed to the good work done by health agencies in the past, the results of which are not quickly wiped out. Also it has been fortunate that during this period there have been no major epidemics, such as have prevailed in previous years. Still, from here and there come reports to indicate that the period of financial disturbances and economic unrest has added materially to the health problem, and calls for increased attention.

What about the near future? Do the curtailed budgets of health agencies effect a real saving, or are they examples of a false economy which will result in a greater incidence of sickness, or loss of life; and will this saving of a few dollars now result in a greater expenditure later to rebuild a fallen structure, and to correct mistakes?

To keep in good health, one needs wholesome living. Important among the elements of wholesome living is good nutrition. In an article by Esther Jacobs of the Community Health Center of Philadelphia and published in the August 1933 issue of the *American Journal of Public Health*, she discussed the diagnosis of clients coming to the clinic during the five-year period from 1928 to 1932, and shows that malnutrition is definitely on the increase. The diagnoses which were made by the medical staff were based on clinical findings and symptomatology—height, weight, condition of skin and tissue, mucous membrane, musculature, and the patient's general condition.

The records showed a gradual increase in malnutrition diagnosis from 23 per cent in 1928 to 36.5 per cent in 1932, or a proportionate increase of 56.5 per cent. These were classified according to sex, but only a slight variation was shown. It is important, Miss Jacobs points out, "to emphasize the gradual upward

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Pathologist

A. H. WARNER, Ph. D.,
Physicist

trend over the entire period, rather than the percentage in any one group at any particular time. However, from the study it would seem that the more serious problem here definitely centers about the six to sixteen-year-old group."

She suggests that such increasing number of malnutrition diagnoses has some significance. There is reason to believe that this situation is due to the depression with its lowered standard of living, inadequate food, overcrowding, and the other evils forced by unemployment and wages hardly enough for bare existence.

Dr. Morris Fishbein, of the American Medical Association, and editor of *Hygeia*, at the meeting of the Mississippi Valley Conference on Tuberculosis held in Indianapolis last year, asserted that the effects of the depression on health will probably be felt shortly, and Dr. Louis I. Dublin in his presidential address before the American Public Health Association last year, in discussing the favorable health situation, declared: "I should, however, point out that our records throw no light on the mental health of the people, which must be anything but good. Nor can I avoid the fear that, should present conditions continue, we will soon become aware of the consequences of malnutrition of children in terms of disease and mortality records."—*Food Facts*.

I am convinced that the control of venereal diseases, and particularly the control of syphilis, offers the next great opportunity for an advance in public health. It is the most important unsolved problem facing us.—Thomas D. Parran, Sr., M. D.

As there are persons who mend torn garments, so there are physicians who heal the sick, but your duty is far nobler, and one befitting a great man, viz., to keep the people in health.—Translation from *Xenophon*.



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* "Getting the Most for Your Money," Bureau of Home Economics, United States Department of Agriculture, December, 1931.

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For further information address

ROBERT A. PEERS, M. D., *Medical Director*
Colfax, California

BOOK REVIEWS

List of Books Received

BOOKS RECEIVED

Hypertension and Nephritis. By Arthur M. Fishberg, M. D., Associate Physician to Beth Israel Hospital; Associate in Medicine, Mount Sinai Hospital, New York City. Third edition, thoroughly revised. Cloth. Pp. 668, illustrated with thirty-nine engravings and one colored plate. Price, \$6.50. Philadelphia: Lea & Febiger, 1934.

Treatment in General Practice. By Harry Beckman, M. D., Professor of Pharmacology at Marquette University, School of Medicine, Milwaukee, Wisconsin. Second edition, revised and entirely reset. Cloth. Pp. 889. Price, \$10 net. Philadelphia and London: W. B. Saunders Company, 1934.

Contagious Diseases. What They Are and How to Deal With Them. By W. W. Bauer, B. S., M. D., Director of Bureau of Health and Public Instruction, American Medical Association; member, Editorial Advisory Board of Hygeia, the Health Magazine. Cloth. Pp. 218. Price, \$2 net. New York: Alfred A. Knopf, 1934.

San Francisco Cancer Survey. Eighth Preliminary Report. (Twenty-first, Twenty-second, Twenty-third, and Twenty-fourth Quarterly Reports). By Frederick L. Hoffman, LL.D., Consulting Statistician, the Prudential Insurance Company of America, Newark, N. J. Paper. Pp. 314. New York: Prudential Press, 1934.

Pathologie und Klinik Der Granulosazelltumoren. Von Dr. Walter Schiller, Assistant der II Universitäts-Frauenklinik (Prof. Dr. Wilh. Weibel) in Wien. Mit 129 Abbildungen, 3 Mehrfarbigen Tafeln und 2 Tabellen. Cloth. Pp. 197. Wien: Verlag von Wilhelm Maudrich, 1934.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and Other Topics of Interest. By Leading Members of the Medical Profession Throughout the World. Edited by Louis Hamman, M. D., Visiting Physician Johns Hopkins Hospital, Baltimore, Md. Volume I. Forty-Fourth Series, 1934. Cloth. Pp. 320. Philadelphia, Montreal, and London: J. B. Lippincott Company, 1934.

BOOK REVIEWS

Textbook of Physiology for Medical Students and Physicians. By William H. Howell. Twelfth edition. Pp. 1132. Philadelphia and London: W. B. Saunders Company, 1933. Price, \$7.

Although the title indicates that this book is for medical students and physicians, it is with some temerity that one of the latter, who has not kept abreast of his physi-

(Continued on Next Page)

NEW MEDICAL BOOKS

1933 Year Book of Radiology	\$7.00
Fishberg: Hypertension and Nephritis (New third edition)	6.50
Nicholson: Laboratory Medicine (2nd Ed.) ..	6.00
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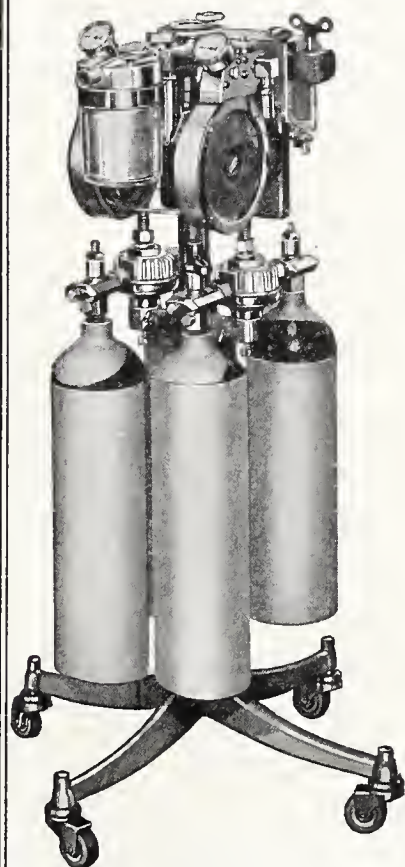
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BOOK REVIEWS

(Continued from Preceding Page)

ology as he might, attempts a review. However, the opinions expressed below will represent those of a practitioner of ten years' vintage and they may, therefore, act as a diluent to the more expert and critical reviews obtainable in other journals.

Most of the chapters are lucidly written, not burdened with too many references, and amply informative. The reviewer does not feel qualified to discuss the opinions and deductions presented in the first six sections. Concerning Section VII, however, he feels that the following comments may be made: The work of Barclay and of many American investigators has fairly well established that the epiglottis retains its obliquely vertical position in the act of swallowing; it may, therefore, be misleading to students to state "That the epiglottis retains its upright position" in that act. The author uses the term "roentgen-ray photographs"; this is extremely misleading to beginners, since roentgenograms are not photographs, but really "shadow-graphs." The experienced physician constantly remembers this fact and curbs his inclination to interpret too much from films alone.

It might be well to insert the words "and from observation under deep anesthesia" after the word "cadaver" at the bottom of page 755. Similarly, at the end of page 756 one might insert "who examine the stomach *in vivo*, under normal conditions" after the word "roentgenologists." For the sake of accuracy the word "semi-solid" might replace the word "solid" before food in the middle of page 758. The author fails to use von Bergmann's beautiful description of the pyloric sphincter as being "the iris of the stomach" and fails to discard the thoroughly disproved theory that acidity or alkalinity of the gastric contents have anything to do with the emptying rate of the stomach.

Indeed, the remark made by Doctor Howell on page 1082, "In the absence of precise data very numerous, and oftentimes very peculiar, theories have been advanced," which he applies to data on the determination of sex, might equally well be applied to current opinions on the function and movement of various parts of the gastrointestinal tract. The most conspicuous misstatements, in the opinion of the reviewer, occur on page 768, "the ileocecal valve prevents the material from being forced back into the small intestine," and on page 770, "fecal matter is normally absent from the rectum." As Barclay has observed, most of our opinions on the function and behavior of the colon are based on isolated anatomical and clinical studies and not on carefully worked out physiological ones.

The chapter on the secretion of the ductless glands seems excellent. The article on the pituitary is so up to date that it includes references to Zondeck's 1933 publication. However, the description of the manifestations of hyperparathyroidism ought to be revised, the bone changes, for example, not being even mentioned.

In summary, one must record the gratitude of the medical profession and students in general to the author for compressing into a single volume of easily handled size so clear a survey of the physiology of the human body. This condensation alone involves a task equal to that of collecting all the data and checking much of the original investigative work. The book continues to be heartily recommendable to all students and practitioners.

L. H. G.

The Technic of Local Anesthesia. By Arthur E. Hertzler. Fifth edition. Illustrated. St. Louis: The C. V. Mosby Company, 1933.

Having regard both to their clinical and their purely technical aspects, this book presents in concise form virtually all of the essential facts now available about local anesthesia. An interesting feature—novel in a work of this sort—is the introduction of a chapter on the psychology of the patient. And it may be remarked, incidentally, that in dealing with this subject the author displays an unusually sympathetic understanding of the patient's viewpoint; indeed it seems probable that many operators would find it to their advantage to consider some of the ideas he advances on this point. The book obviously is based on a broad background of experience; and on reading it one senses between the lines qualities of finesse and ripeness of judgment often wanting in similar works of larger compass. The illustrations are excellent. In brief, the book contains much good advice in an artistic setting. It is one of the best discussions of local anesthesia that the reviewer has seen.

L. B.

Industrial Health Service. By Leverett Dale Bristol. Pp. 170. Philadelphia: Lea & Febiger, 1933. Price, \$2.

This small handbook presents a health program suitable to meet the needs of a large industrial organization. The scheme advanced is a well-balanced one, designed with a view both to conserve the health of the workers and to promote the welfare of the employer's business.

The subject-matter is set forth under three heads. Part one gives a general outline of the plan as viewed from the standpoint of the management; it includes such mat-

(Continued on Page 14)

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BOOK REVIEWS

(Continued from Page 12)

ters as the tabulation of the employees in a sort of census plan, with reference to age, sex, illness record, death, etc. These data naturally form the basis of many conferences between the employer and his workers. The author devotes a chapter to the communicable diseases and canvasses their relation to such factors as crowding, personal cleanliness and work equipment. And in connection with the subject of tuberculosis control among employees, he points out that in each instance this implies a correct diagnosis, proper direction of treatment and, later, field visits by agents of the employer. With respect to the occupational diseases, reference is made to the necessity for proper medical examination and care and also to the obligation on the part of the employer to educate his workers both as to the general and as to specific health hazards. Another point stressed is the importance of pre-employment physical examinations in relation with the effective placement of workers, the prevention of occupational diseases, and the exclusion of persons afflicted with infectious conditions. Finally, periodic health examinations are advocated as well as home visiting where practicable.

Part two deals with the responsibilities of the health service personnel, while in part three this service is considered from the standpoint of the individual worker.

All in all, it is a readable book and, though obviously prepared for the information of lay readers, it is well worth the attention of institutional medical directors.

L. I. N.

Fetal, Newborn, and Maternal Morbidity and Mortality. White House Conference on Child Health and Protection. Pp. 486. New York: D. Appleton-Century Company. Price, \$3.

In this volume of the White House Conference, "Fetal, Newborn, and Maternal Morbidity and Mortality," published by The Century Company, there are collected and presented the problems of obstetrics from the group on whom the teaching of obstetrics rests in the United States. The present problems are emphasized and data is here presented which cannot be found in any one volume; the literature to date has been reviewed and the result is a volume which should be in every person's hands who teaches or practices obstetrics as a specialist or an intelligent general practitioner.

It should be on the shelves of every maternity hospital

and training school for nurses. By these groups the education of the laity is powerfully influenced.

If public health or personal hygiene are to have any punch in them in courses given in colleges, normal schools, and even high schools, the problems of healthy mothers and healthy children, as well as healthy fathers, must be emphasized. Intelligence on the part of the laity is a cooperating force in better public health.

A. B.

Obstetrics and Gynecology. Edited by Arthur Hale Curtis. Volumes 2 and 3. Illustrated. Philadelphia and London: W. B. Saunders Company, 1933. Price \$35, set.

The second and third volumes and a general index published as a separate volume are now available to the profession. The second volume deals with the pathology of labor and puerperium, and the infectious processes and neoplasms of the uterus and adnexa. The third volume is devoted entirely to gynecology and covers displacements and relaxations, disturbances of function, the endocrines in relation to the female genitalia, and numerous discussions of special subjects. Most of the contributors to these volumes are national authorities on matters obstetric and gynecologic. The subject-matter as presented by them is, therefore, not only reliably compiled and described, but also clarified in a style which makes reading interesting and readily available for quick reference. Both volumes are profusely illustrated, which greatly enhances the usefulness of this publication. Weeks of patient perusal of these volumes convince the reviewer that it is quite impossible to point out the many fine points of this publication in a short review. It suffices to say here that the authors, under the editorship of Doctor Curtis, have succeeded admirably in adding a splendid contribution to the American medical literature. The publishers deserve high praise for the excellency with which they have executed the production of these volumes.

L. A. E.

Drinking Utensils Need Sterilization.—The Surgeon-General of the United States Public Health Service has called attention to misleading information relative to the sterilization of beer glasses. It would appear that an eastern brewery has advised retail distributors that beer should be served in wet glasses and that glasses or other containers should not be washed in soap. Retailers are advised by the brewery to rinse

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glasses in fresh, cold water just before pouring beer into them, "as this allows the foam to show and stand up much better."

This misleading information is not in conformity with the state law in California which requires the sterilization of drinking utensils. The State Board of Public Health does not specify any single method of sterilization that must be employed, but it is insisted that all drinking utensils in public places be thoroughly cleaned before using. There is always a possibility that communicable diseases may be transmitted through unclean glasses.

TWENTY-FIVE YEARS AGO

(Continued from Text Page 284)

ease; and accordingly at the risk of being tedious I am going to consider the dangers of impure milk in some detail. . . .

. . . I will give you a brief sketch of the founding of the first medical milk commission by Dr. Henry L. Coit of New Jersey, in 1893. During the spring of 1887 he found himself confronted with the task of feeding his infant son. . . .

. . . Doctor Coit also coined the term "certified" milk, and got a legal decision restraining anyone from selling or advertising "certified" milk unless authorized to do so by the county medical society. If unscrupulous dairymen try to sell unauthorized milk as certified, we shall have to get such legal protection here also. . . .

. . . Three cities in California have medical milk commissions: San Francisco, Oakland, and Los Angeles.

. . . "The San Francisco County Commission was organized in 1905, but was put out of business by the earthquake. At that time we were certifying to the milk of two dairies. . . .

(Continued on Page 17)

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In gastrointestinal disorders, "Dextri-maltose has been preferred to the other sugars as apparently less irritating."—*E. Cassie and U. Cox: The examination of the gastric contents in infants, with some considerations as to the value of lactic acid milk in infant feeding, Lancet, 2:322-325, August 14, 1926.*

"As to the kind of extra carbohydrate to be added, whether lactose or maltose, I believe dextri-maltose to be better in general in cases of fat indigestion infantile atrophy."—*C. H. Dunn: The Hygienic and Medical Treatment of Children, Southworth Co., Troy, New York, 1917, V. 1, p. 418.*

In the treatment of decomposition, "The period of repair may be shortened by giving suitable additional food; the best, probably, being buttermilk to which carefully regulated proportions of dextrin and maltose preparations or malt soup are added."—*E. Feer: Text-Book of Pediatrics, J. B. Lippincott Co., Phila., 1922, p. 284.*

In infantile atrophy, "The carbohydrate should be increased by gradual addition of dextrimaltose.

"Malt soup or dextrimaltose (Mead's) should be added in teaspoonful or more doses to each feeding until the point of carbohydrate tolerance is reached."—*L. Fischer: Diseases of Infancy and Childhood, F. A. Davis Co., Phila., 1925, V. 1, p. 285.*

In the case of a premature infant, "Dried milk with water was given, which later was changed to whole milk, 14 ounces; water, seven ounces, and dextri-maltose No. 1, one and one-half ounces. Seven feedings of three ounces each every three hours was given. The above feeding was retained. The infant gained eight ounces at the end of the first week."—*L. Fischer: Clinical notes in a series of premature infants, Arch. Pediat. 44:227-231, April, 1927.*

In the treatment of decomposition, "As a rule it is best to start with 2 to 2½ or 3 ounces of albumin milk to the pound weight in 24 hours; the sugar to be added is in the form of a maltose-dextrin mixture. One should never delay too long in adding this."—*C. G. Grulec: Infant Feeding, W. B. Saunders Co., Phila., 1922, p. 265.*

With reference to hypotrophy, "In mild cases, the addition of dextrimaltose instead of cane or milk sugar may be sufficient to obtain a gain in weight."—*C. Herrman: The treatment of nutritional disorders in artificially-fed infants, New York M. J. 114:158-160, August, 1921.*

In athrepsia, "The carbohydrates are usually added in a slowly fermentable form, such as the maltose and dextrin compounds, which are usually started by the addition of four grams per kilogram (1/15 ounce per pound) and increased until eight grams or more per kilogram (¼ ounce per pound) of body weight are added."—*J. H. Hess: Feeding and the Nutritional Disorders in Infancy and Childhood, F. A. Davis Co., Phila., 1928, p. 278.*

Concerning the treatment of marasmus, "When the stools have become smooth and salve-like, carbohydrate, in the form of dextrimaltose, may be gradually added up to the limit of tolerance."—*L. W. Hill: Practical Infant Feeding, W. B. Saunders Co., Phila., 1922, p. 281.*

In the feeding of prematures, "As soon as there is a hesitation in the gain in weight, dextrimaltose No. 1 is substituted for the dextrose, in the same amount in the mixture, with almost invariably a gain in weight."—*F. B. Jacobs: Relation of irradiated food substances and ergosterol versus cod liver oil in childhood nutrition, Pennsylvania M. J. 35:164-167, Dec., 1931.*

"A spasmophilic baby on bottle feeding should receive a limited amount of milk—a pint, or at the most 24 ounces in the 24 hours—to which cereal gruel and some form of sugar is added, preferably one of the malt dextrin preparations; also the early addition of other foods than milk to the baby's diet."—*M. Jampolis: Infantile spasmophilia, Interstate M. J. 25:652, Sept., 1918; abst. Arch. Pediat. 35:691, Nov., 1918.*

In cases of malnutrition and indigestion, "The appetite improves rapidly, and the stools soon become normal in appearance, if the sugars are intelligently prescribed. By this I refer to proper proportions of dextrin and maltose. When there is a tendency to looseness, I have used the preparation known as 'dextri-maltose,' for the extra

carbohydrates; . . ."—*M. Ladd: Further experience with homogenized olive oil mixtures, Arch. Pediat., 33:501-512, July, 1916.*

In pyloric stenosis, "With low dextrose tolerance, a maltose dextrin preparation may be added in whole or in part. Even where the dextrose is well tolerated and gain in weight has ceased, impetus to the weight intake may be given by the addition of a maltose dextrin preparation."—*D. J. Levy: Pyloric stenosis and pylorospasm of infancy with especial reference to medical treatment, J. Michigan St. M. S., 21:166-170, April, 1922.*

With reference to the treatment of diarrhea, "After several days, 2% to 3% of a maltose-dextrin preparation may be added (Dextri-Maltose). This is preferable to the easily fermentable lactose or cane sugar."—*F. Lust: The Treatment of Children's Diseases, J. B. Lippincott Co., Phila., 1930, p. 145.*

In dyspepsia, "The carbohydrate must not be allowed to exceed 3 per cent. Dextri-maltose is the most suitable sugar."

In the treatment of decomposition (atrophy, malnutrition, marasmus), "... when there has been obvious improvement, dextri-maltose is gradually increased from 3 to 5 per cent."—*B. Myers: The nutritional disturbances of infancy, Brit. M. J., 1:1079-1083, June 21, 1924.*

"The treatment of artificially fed children in the first of these groups consists in putting them on a low fat dietary, and giving them carbohydrate in the form of one of the less fermentable sugars—e.g., dextri-maltose."—*L. G. Parsons: Wasting disorders of early infancy, Lancet, 1:687-694, April 5, 1924.*

In the milder cases of anantion, "Regulation of this disturbed organismal balance is obtained by the addition of carbohydrates, while fat and casein are reduced. For this purpose dextrimaltose and flour are better than the ordinary sugars, since they are more slowly absorbed and have greater efficacy in their powers of controlling the flora in the large intestine."—*W. J. Pearson and W. G. Wyllie: Recent Advances in Diseases of Children, P. Blakiston's Son & Co., Phila., 1930, p. 116.*

In intestinal intoxication, "I have had more experience with dried skimmed milk in which 2 to 5 per cent dextrimaltose, barley or rice flour has been cooked, and the mixture subsequently fermented by lactic acid bacilli or soured with lactic acid, than with any other food except protein milk."—*G. F. Powers: A comprehensive plan of treatment for the so-called intestinal intoxication of infants, Am. J. Dis. Child., 32:232-257, August, 1926.*

Regarding the treatment of the marantic infant, "After the intolerance to sugar has been overcome a carbohydrate, preferably Dextri-maltose, may be added."—*C. S. Raue: Diseases of Children, Boericke & Tafel, Phila., 1922, p. 427.*

In spasmophilia, "Dextri maltose is the best sugar to use in these cases, in the proportion of 6 to 8 per cent."—*J. H. Reading, Jr.: Spasmophilia, Hahneman. Monthly, pp. 403-411, July, 1922.*

In the treatment of atrophy, "If the baby continues to improve, the next step in the treatment is to add to the milk one of the less fermentable carbohydrates, such as dextrimaltose; . . ."—*H. Thurstfield and D. Paterson: Diseases of Children, William Wood & Co., 1929, p. 105.*

"I also find dextri-maltose an excellent addition to albumin-milk when the first object of that food has been achieved and a gain in weight is desired in this way I have succeeded in feeding albumin-milk far beyond the period usually advised, with highly gratifying results."—*F. L. Wachenheim: Infant-Feeding; Its Principles and Practice, Lea & Febiger, Phila., 1915, p. 158.*

"Dextri-maltose has been substituted for lactose not infrequently, when the tolerance for the latter continues low."—*I. H. West: Low fat, high starch evaporated milk feeding for the marasmic baby, Arch. Pediat. 48:189-193, March, 1931.*

"Malt sugar is indicated when others fail to produce a sufficient gain, or when malassimilation of fat is evident."—*O. H. Wilson: The role of carbohydrates in infant feeding, Southern M. J. 11:177, March, 1918; abst. Arch. Pediat. 35:447, July, 1918.*

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TWENTY-FIVE YEARS AGO

(Continued from Page 15)

From an article on "Report of the Milk Commission of the San Francisco County Medical Society" by the Chairman, Alfred Baker Spaulding, M.D., San Francisco.

... Briefly, "certified milk" means a milk from well-fed, healthy, nontubercular cows, a milk so free from contamination and so carefully handled from the time of milking to the time of delivery, that the bacteria content shall not at any time exceed 10,000 germs per cubic centimeter, a milk containing all the nutritious milk solids without subtraction, addition or manipulation of any kind, a milk that is immediately cooled, bottled and sealed at the producing farm and delivered cold in such original container to the consumer as quickly as commercial facilities will permit. . . .

From an article on "Persistent Omphalomesenteric Duct with Accessory Pancreas" by W. W. Roblee, M.D., Riverside.

... Upon inspection I found that since seeing the patient about a month previous, a small tumor mass had developed outside of, but connected by a pedicle to the umbilicus. . . .

... At this date, eight months after the performance of the operation, it has healed completely and no more moisture occurs at the umbilicus. . . .

Spinal Anesthesia—A Critical Review.—No method of anesthesia has been the subject of more contradictory reports than the spinal method. . . .

... Today, with perfected technique, absolute asepsis and the possession of numerous substitutes for cocaine, the diverse, long operative lists still fail to clear up this condition of indecision as to the usefulness of spinal anesthesia. . . .

CALIFORNIA BOARD OF MEDICAL EXAMINERS

(Continued from Text Page 284)

restitution of approximately \$20,000 he received from various local persons in connection with promotion of the Tia Juana station and his recording devices within one year. The probationary term is five years. The court will retain jurisdiction over Rood by dropping from the calendar a grand theft charge against him. If the terms of probation are not met, Rood may be returned here on the grand theft warrant. Rood testified that his income from his astrological reading and his radio broadcasting frequently runs \$1,000 a day and that repayment of the money will be made within a year. The court had offered to grant him a two-year period. The \$1,000 delivered yesterday was advanced by a radio station at Eagle Pass, Texas, with which Rood has a contract" (San Diego Union, March 3, 1934). On December 14, 1933, Rood was assertedly charged with violation of the Medical Practice Act and later pleaded guilty; however, the above mentioned felony charges took precedence in the consideration of the sentence imposed on Rood.

"S. A. Barber, Tulare County physician, has been given a pardon by Governor Rolph after completing his eight months' sentence in the Visalia jail on a charge of unlawful sale of narcotics. The pardon was issued at the request of Superior Judge Pat R. Parker, who passed sentence, and District Attorney Walter C. Haight, who advised the State Executive that the pardon would be necessary before Doctor Barber could apply for a renewal of his license from the State Board of Medical Examiners" (San Francisco Examiner, February 26, 1934). Doctor Barber's license was restored by the Board of Medical Examiners February 26, 1934, and he was placed on five years' probation, without narcotic privileges.

(Continued on Next Page)



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(Continued from Preceding Page)

"A court order enjoining Thomas S. Bagley of Richmond from continuing his practice, using certain methods in his chiropractic business, is sought in a petition filed in the County Clerk's office here yesterday by Percy Purviance of San Francisco, conductor of a San Francisco Chiropractic College. Purviance's action charges that Bagley is incompetent and unskilled in the science of diagnosing treatment of diseases, injuries and deformities, and that his incompetence is dangerous and injurious to the health of the people of the city of Richmond." (Martinez Herald, February 4, 1934.)

Wilbur Lester Parker, whose right name is said to be Willard Thompson, and sometimes mentioned as Edgar Willard Thompson, featured in the 1931 and 1933 annual reports of the Board of Medical Examiners, was on February 3, 1934, convicted in the Federal Court at Houston, Texas, on a charge of violation of the Dyer Act and was sentenced to serve fifteen months in the federal penitentiary at Leavenworth, Kansas. On February 7, 1934, he was reported to have been moved to Los Angeles for trial on a federal impersonation charge. (Previous entries, July and September, 1928; October, 1933.)

"A belief that Mexico's action in closing the Brinkley station XER at Villa Acuna Coahuila may open the way of solution of the border radio problem and insure a successful radio conference with Mexico at an early date, was expressed today by government officials. 'I am very gratified to hear of the Mexican Government's action in closing this station,' said E. O. Sykes, chairman of the Federal Radio Commission.

'I think it will go a long way to smoothing out radio difficulties between the two countries.'" (Associated Press dispatch dated Washington, D. C., February 25, printed in the Los Angeles Times, February 26, 1934.)

"Alleged osculatory overtures of Dr. Harvey P. Charles, Berkeley physician, yesterday led to his conviction on a battery charge . . . on complaint made against him by Mrs. Freda Miller and Miss Anne Shepherd, blind saleswomen of Berkeley. . . . The two women both charged that the physician seized them and tried to kiss them when they went to his office to sell him articles made by blind persons." (San Francisco Examiner, February 23, 1934.)

"Over his protest that he had 'never seen the woman and did not know her,' Dr. Oscar W. de Vaughn, negro physician, prominent in West Oakland, was being held today on a murder charge in connection with an alleged illegal operation. He was arrested on complaint of Manuel Schwartz, 876 Lisbon Street, who alleged his wife, Mrs. Louise Schwartz, 31, died in an Oakland hospital following an operation performed by Doctor de Vaughn in his office at 1156 Seventh Street." (Oakland Post-Inquirer, February 17, 1934.) (Previous entries, September and December, 1930; November, 1933.)

"A license to practice medicine was restored yesterday to Dr. Jesse I. Citron of Hemet, former prominent Hollywood and Beverly Hills physician, by the State Board of Medical Examiners. . . . Doctor Citron was deprived of his license October 19, 1932, on a charge of violating the State Poison Act by prescribing narcotics for Alma Reubens, screen actress, who later died. Five years' probation was imposed as a

(Continued on Page 21)

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(Continued from Page 18)

condition to the restoration of the license, although the Medical Board told Doctor Citron it had been strongly influenced by his attempts to rebuild his character in new surroundings and by the fact that he had a family dependent upon him. Included in the terms of probation were the restrictions that Doctor Citron must not apply for a federal narcotic license and he must not prescribe or have any narcotics in his possession during the probationary period. . . ." (Los Angeles *Illustrated Daily News*, February 27, 1934.)

"Dr. Herman B. Misch, who has an office in West Santa Barbara Boulevard, was arrested yesterday by Federal Narcotic Agents on a charge of selling narcotics to Willard Arenz. Arenz was also taken into custody as a material witness. They will appear before the United States Commissioner today." (Los Angeles *Times*, February 21, 1934.)

"Unable to work gratuitously any longer, Dr. Edward H. Williams and Edson H. Steele yesterday resigned from the City Narcotic Clinic, which for the past three years has cared for indigent narcotic users. . . ." (Los Angeles *Examiner*, February 27, 1934.)

"The grand jury voted to indict Nicholas R. West, with offices in the Hobart Building, for alleged violation of the Medical Practice Act. He was charged with selling medical services through the mails, and the case brought before the grand jury was that of Merle Payne, a boy living at Scott's Bar in Siskiyou County, whose parents are said to have paid West

\$250 to cure the lad of tuberculosis. He died some months later." (San Francisco *Chronicle*, March 6, 1934.)

"Revocation of the license of Dr. Frank Andruss Northrup of San Luis Obispo was ordered yesterday by the State Board of Medical Examiners after the physician had been found guilty on a narcotic charge. . . ." (Los Angeles *Times*, February 28, 1934.) (Previous entry, December, 1933.)

"A third health racketeer pleaded guilty in Alameda County yesterday. James Christian, a salesman for Harry Kramer, confessed health association swindler, admitted misdemeanor violation of the state insurance laws before Superior Judge Wood and was given his choice between a \$400 fine and eighty days in the county jail. He took the jail sentence. . . . E. L. Knotts, another Kramer salesman, has likewise pleaded guilty and is serving a jail sentence. Another, Harry Blankenstein, has pleaded not guilty and will go to trial. . . . One San Francisco health organization, against which complaint has been made, is offering a \$1,000 life insurance policy on another company as a special inducement for prospects to take its health policy, according to Inspector J. W. Davidson of the State Board of Medical Examiners. 'We found,' said Davidson, 'that this life insurance concern had \$59 in the bank.'" (San Francisco *Chronicle*, March 9, 1934.)

"Imprisonment was ordered for a fourth health racketeer in Oakland yesterday. Harry Blankenstein, alias Harry Blank, was sentenced to serve ten months in jail by Superior Judge Wood. In passing sentence, Judge Wood said he found that Blankenstein in his plea for leniency had exaggerated the extenuating cir-

(Continued on Next Page)

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(Continued from Preceding Page)

cumstances. These were that he was seriously ill and that his wife and three children would become wards of charity." (San Francisco *Chronicle*, March 13, 1934.)

"Al T. Taylor, forty-two, asserted salesman for a health and accident insurance company, was arrested yesterday in Alameda County on a charge of petty theft. Taylor was arrested on complaint of John Lalley, 937 Pacific Street, Alameda, who charged that he had given him \$20 for an insurance policy in a Los Angeles company, which he later discovered had no resources." (San Francisco *Chronicle*, March 11, 1934.)

"Medical men of San Francisco awaited today an opinion from Attorney-General U. S. Webb, expected to clear the health insurance atmosphere. The opinion, it was promised, will outline the status of fraudulent concerns, which are operating internationally out of San Francisco. It also will, according to Neil Cunningham, Deputy Attorney-General, set forth possible methods of organizing legitimate groups by physicians to give the laymen of the state the benefits of health insurance and drive out the illegitimate concerns. . . ." (San Francisco *News*, March 10, 1934.)

What Every Woman Doesn't Know—How to Give Cod-Liver Oil.—Some authorities recommend that cod-liver oil be given in the morning and at bed time so as to assure an appetite for the oil, while others prefer to give it after meals in order not to retard gastric secretions. If the mother will place the very young baby on her lap and hold the child's mouth

(Continued on Page 24)

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(Continued from Page 22)

open by gently pressing the cheeks together between her thumb and fingers while she administers the oil, all of it will be taken. The infant soon becomes accustomed to taking the oil without having its mouth held open. Mead's Newfoundland Cod-Liver Oil, of minimum acidity and prepared from fresh healthy livers, is well tolerated by infants and children and is palatable without flavoring.

If given cold, cod-liver oil has little taste, for the cold tends to paralyze momentarily the gustatory nerves. As any "taste" is largely a metallic one from the silver or silver-plated spoon (particularly if the plating is worn), a glass spoon has an advantage.

Mead's 10 D Cod-Liver Oil is made from Mead's Newfoundland Cod-Liver Oil. In cases of fat intolerance the former has an advantage, since it can be given in one-third to one-half the usual cod-liver oil dosage.

Looking Back on 1933.*—From a public health standpoint, the year 1933 in California has been an unusual year. It has been a crucial time in public health administration. Working under reduced appropriations, handicapped by losses in personnel, health officers have labored under difficulties. In spite of the many handicaps suffered through loss of financial support, commendable records have been made. While public health conditions generally have been good, there are indications that many old problems in public health are becoming intensified and many new problems are also appearing on the horizon.

Increased numbers of reported cases of tuberculosis and the venereal diseases in some localities would, at first glance, make it appear that these diseases are more prevalent. The increases are more apparent than

* By Giles S. Porter, M. D., Director, California Department of Public Health.

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real, however, for most of such cases are reported from public clinics, and the economic trend of the times has had much to do with increased attendance at such clinics. While it is reasonable to believe that more cases of tuberculosis have developed in the general population during 1933, there is slight indication of any increase except in the larger numbers of cases that are reported locally from free clinics. It may be, however, that this is only a reflection of the reduced economic status of the general public.

The exodus of Mexicans to their native land has been productive to a certain extent of better public health records, particularly in southern California. The removal of these people has resulted in a lower birth rate for the state as a whole. It has also been a factor in bringing about reduced rates for infant mortality, tuberculosis, and venereal diseases among Mexicans.

None can state what changes in population have occurred within the state during the past year. It is certain that there has been a distinct movement of the general population from urban to rural districts, but little accurate information upon the subject is available. There has been an unprecedented migration of casual laborers and unemployed to California. The Civilian Conservation Corps camps have brought thousands of young men into the state, but they have been under direct medical supervision and public health conditions among them have been kept under control. It has been suggested that a census of the population should be taken in 1935 in order that public officials may have more reliable available information relative to the status of the general population. It would certainly be of the utmost value to health officers if such a census were taken. The changes that have occurred since the census of 1930 make it highly important that an enumeration be made five years later. The use of federal funds for emergency relief might well be de-

(Continued on Next Page)



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(Continued from Preceding Page)

voted to important work of this nature and it would provide employment for many individuals. Certainly, no accurate appraisal can be made of the status of social and health conditions until such time as more reliable information relative to the population of the state shall become available.

The year 1933 brought two unusual situations which required intensive effort upon the part of the State Department of Public Health. The first of these was the earthquake disaster in Long Beach and vicinity. Through the active coöperation of state and local officials, the sanitation of this district following breakage in water and sewer mains was maintained in a high degree of efficiency. No epidemic of communicable disease followed this disaster. The cotton pickers' strike in the southern part of the San Joaquin Valley, which occurred in the fall of the year, also brought problems in sanitation which required concentrated efforts on the part of state and local health officers. In spite of the difficulties encountered, the general situation within the district was maintained at a high level.

Among the communicable diseases during 1933, intestinal infections have demanded first attention. Typhoid fever, bacillary dysentery, and food poisoning cases have occurred continually. Although the incidence of typhoid fever during recent years has been reduced greatly, this disease must still be reckoned with. Outbreaks, the sources of which are still obscure even after intensive investigations, have been too common during the past year. Since food supplies under modern methods of distribution come from a wide variety of sources, strictest diligence must be used in establishing the purity of all food products that are consumed by the general public. Outbreaks of bacillary dysentery have also occurred commonly during the past year and cases of food poisoning have occurred with remarkable regularity. In spite of the

(Continued on Page 28)

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(Continued from Page 26)

great improvements that have been made in the sanitation of food-producing establishments and in methods of storing and handling foods, there is still room for vast improvement. The proper handling of food products is not all that might be desired.

On the other hand, there is evidence that many of the gastro-intestinal infections that are so widespread in their prevalence throughout the country may probably be due to a virus. This fact alone makes the careful investigation of all outbreaks of this character a matter of first importance. Nothing could better emphasize the changing characteristics that occur in communicable diseases than the present status of intestinal infections. The field for investigation into the subject is almost unlimited, and health officers throughout the state are well aware of the difficulties encountered in the control of these diseases.

Since the Chicago outbreak of amebic dysentery in the late summer of 1933, the physical examination of food handlers has assumed a new importance. Pasadena, San Diego, and Glendale have ordinances which require the physical examination of food handlers. In the light of present events, it would seem that many other cities might profit greatly through the adoption and enforcement of such regulations. It is well known that there are large numbers of typhoid carriers who remain undiscovered, and it is reasonable to suppose that no inconsiderable number of such carriers is always present among food handlers. The discovery and weeding out of such carriers might be of inestimable importance in reducing the prevalence of many intestinal infections.

Rabies in animals has been unusually prevalent during the past year, with indications that the disease is spreading into communities where it has been of rare occurrence. The disease first appeared in California in 1899 and, while it is kept under control in some counties, in many communities no apparent efforts in the control of the disease have been noticed. Unless

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action is directed toward the control of this disease among dogs, it is reasonable to suppose that human deaths from this easily prevented disease will occur.

Psittacosis has constituted an important problem during the past year. State regulations for the control of this disease have been enforced, but due to lack of coöperation among a few individuals the enforcement has not been as successful as might be desired. Recent developments, however, indicate that the state regulations are now observed in better fashion. The disturbing embargoes upon California parakeets are still in effect, however.

Plague is always a problem in California, and the survey conducted by the Bureau of Sanitary Inspections has revealed that this disease is still found in rodents in widely separated communities of the state. A single human case of this disease occurred in 1933. Vigilance in determining the trend of plague and in the destruction of infected rodents is essential if the general public is to be safeguarded properly against this highly fatal disease.

The State Department of Public Health, when requested by local health officers, has assisted in carrying on immunization programs against both diphtheria and smallpox. As a result of this work, many thousands of California children have been immunized against diphtheria. This work is done only in those communities which request it. In the rural districts, where immunization is not readily available to the average child, organized efforts are productive of particularly beneficial results in the prevention of diphtheria.

The year 1933 has not produced visible scars due to the effects of the economic depression. The reduced economic state of the general population may have developed conditions which will be reflected in the public health records of future years, but no immediate effect has become visible as yet. It is doubtful that there has ever been a time when the intensive appli-

cation of the principles of public health has been needed more than at present. There is an uncertainty which makes the application of such principles indispensable.

Health officers are alert in discovering new and unfavorable conditions as they appear. It is only through the support of the general public and the lawmakers that public health can be safeguarded in adequate fashion. The coming year will unquestionably bring many new problems before local health officers, and many old problems will unquestionably become more aggravated. In spite of handicaps, health officers are endeavoring to prepare against contingencies and with a brighter outlook in the economic situation it is hoped that the public health may be maintained at least on an even keel.

The Costs of Accidents—"What does it cost?" This is the question asked about most of our human affairs. It is the immediate query whether the article of purchase is an opera seat, or a basket of clothespins, a book or a railroad.

When we talk about the costs of accidents we must keep in mind that there are many costs: the actual out-of-pocket expense in paying the workmen's compensation to the family of the workman killed; the loss to the employer of a trained and valuable worker, and the "social" cost, meaning the loss to society as a whole through the premature destruction of a human life. The money cost is paid by the consumer in the end. Everyone pays. Accident costs often represent the possible profit to the shareholder.

We know that there were about 88,000 accidental deaths in the United States in 1932, and 97,415 in 1931. We know that the 1932 total is an increase of 6,000 deaths per year since 1913, and that the population has increased more rapidly than these deaths, so that the accidental death rate per 100,000 population

(Continued on Next Page)

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(Continued from Preceding Page)

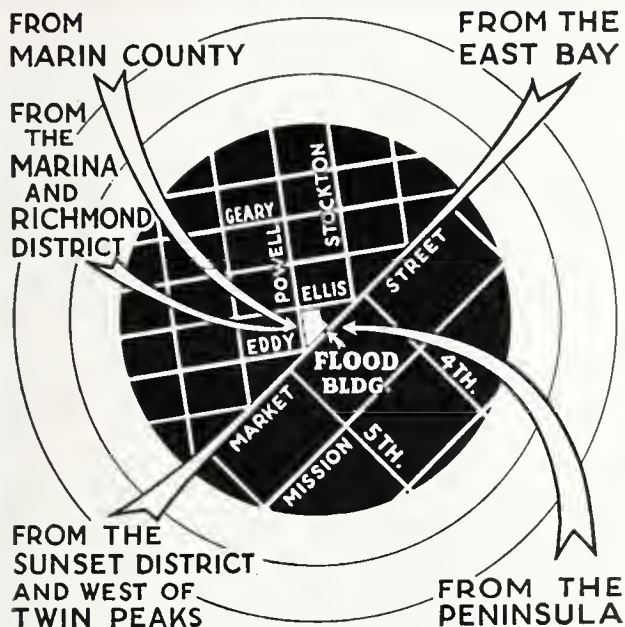
was really 18 per cent lower in 1932 than in 1913. From the time of the organization of the National Safety Council in 1913 up to and including 1932, 175,250 lives have been preserved from accidental death.

To provide the basis for effective accident prevention work, we have attempted to separate these fatalities into a four-fold classification: (1) industrial accidents, (2) home accidents, (3) motor vehicle accidents, and (4) public accidents not involving a motor vehicle. The information available to make this separation is entirely inadequate. In only one classification, motor vehicle accidents, can we be entirely sure of our ground. Here we do know that in 1932 there were approximately 29,500 deaths, representing an increase in the death rate per 100,000 population of 400 per cent since 1913. It is this type of accident, of course,

which has been increasing by leaps and bounds during the last twenty years.

Even in the field of industrial accidents we are still forced to make the statement that we can only guess at the annual number of deaths. Including all types of accidents that occur while people are at work, we believe that in 1932 there were about 15,000 such deaths. We estimate 28,000 in home accidents, and the remaining 18,000 or so fatalities, according to our best information, occur in public places, but not in the course of operating a motor vehicle.

About nonfatal accidents we know less than fatalities. Rather extensive investigation in the field of industrial accidents indicate a ratio of 90 nonfatal injuries to each fatality. Information on motor vehicle accidents that is now available tells us that the minimum is about 35 nonfatal injuries to each motor vehicle death. Certain data made available by insurance com-



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panies give foundation for the estimate that the ratio of nonfatal home injuries to home fatalities is even higher, running perhaps 200 to 1. For public accidents not involving a motor vehicle, we are without reliable statistics, but, considering the circumstances and types of injuries that occur, we have made a guess (and it is a guess) of 100 nonfatal injuries to each death.

Granting that these figures are based on insufficient data for them to be considered accurate, it seems quite certain that they are conservative, that they are *minimum* rates. *On the basis of these figures, there are at least 8,500,000 persons injured or killed in accidents in the United States each year.*

A third result of an accident may be damage to property, either with or without the injury or death of a person. I have also some approximate figures on the losses involved, in dollars and cents, including both injury and noninjury accidents. By bringing up to date the estimate made by the United States Bureau of Labor Statistics on the cost of industrial accidents several years ago, it would seem that \$600,000,000 must be charged to such accidents each twelve months. In like manner the National Conference on Street and Highway Safety has estimated the property damage and personal injury costs of automobile accidents,

and, bringing their figures up to date, we arrive at the total of \$600,000,000 as the annual loss. The National Fire Protection Association believes our annual fire loss is \$550,000,000. With very inadequate information, we have also calculated that an additional \$750,000,000 is lost annually as an outcome of home accidents and public accidents not involving a motor vehicle. These figures mount to a total exceeding \$2,000,000,000 as the annual cost of accidents to the people of the United States.

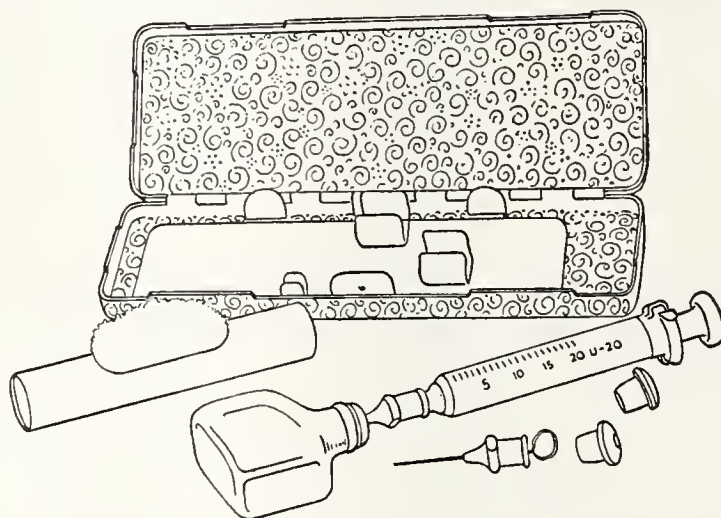
Let us see for a minute whether or not accidents are important to the community at large, and to the individual taxpayer and contributor to social welfare agencies. The treatment of accident cases in the Detroit Receiving Hospital in one fiscal year cost that city \$609,784. In one mid-western city 17 per cent of the applications for relief were traceable to accidents. Approximately 10 per cent of the cases handled by the United Charities of Chicago in one year were the direct results of accidental injury. The general experience of hospitals is that not more than 60 per cent of the cost of treating highway accident victims is collectible. The estimate of the financial loss sustained by hospitals in the United States each year from highway accident cases is between \$6,000,000 and \$7,000,000.

(Continued in rear advertising section, Page 34)

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No. 4

PRACTICAL OBSERVATIONS BASED ON EIGHT HUNDRED THYROIDECTOMIES*

By A. B. COOKE, M. D.
Los Angeles

DISCUSSION by Wallace I. Terry, M. D., San Francisco;
Joseph K. Sawindt, M. D., Pomona; Charles T. Sturgeon,
M. D., Los Angeles.

AMONG the many wearisome features with which the medical literature of the present day abounds, statistics and statistical tables probably hold first place. It is not my purpose to offend in this respect. The great labor involved in compiling statistics, and the reluctance on the part of the average reader to dig out any nuggets of truth they may chance to contain, restrain me from inflicting them upon you. Then, too, I recall the pet saying of a former blunt-spoken colleague with which he was wont to open his discussion of such papers, to the effect that "there are just three kinds of lies: plain lies, d---d lies, and statistics."

Instead, I propose to call attention, under a number of separate headings, to certain practical deductions drawn from a personal experience of more than eight hundred thyroidectomies, covering my work up to July of the present year, and to emphasize these deductions, according as they have seemed important and valuable to me.

First, to dispose of certain general considerations underlying such a study: sex, age, type of case, diagnostic points, etc.

ETIOLOGIC FACTORS

Sex.—Only 75 per cent of my cases have been encountered in females. This is less, by some 15 per cent, than is ordinarily reported. I can offer no explanation of the discrepancy, unless it is due to the fact that it has always been my custom to advise surgical removal in all cases of adenomatous goiter, where no positive contra-indication existed. As is well known, this type of goiter is much more prevalent in the male than is Graves's disease. Several reasons have seemed to me sufficient to justify such routine advice: (1) the adenomatous thyroid is markedly refractory to other methods of treatment; (2) if not giving rise to toxic symptoms at the time, it is

very apt to do so later; (3) while the incidence of malignancy of the thyroid is not large, it is generally accepted that it almost invariably develops in the adenomatous gland.

Age.—The youngest patient in this series was nine years of age—a severe case of true exophthalmic goiter. The eldest patient was seventy-eight years old. Both were females. The two decades between thirty and fifty have supplied about 65 per cent of my cases, the sixth and third decades following in the order named.

Social Condition.—I have not observed that social condition plays any material part in determining the incidence or type of thyroid disease except, perhaps, as poverty and mental worry seem to favor the occurrence of exophthalmic goiter. The preferred age for true Graves's disease is known to be the years of active productive life, when mental and emotional burdens are likely to be most numerous and weighty. Practically all the cases of thyroid adenoma met with in Southern California appear to have been of imported origin. I do not remember to have seen a case in a native-born patient who had spent the years of childhood and adolescence in the southern part of the state.

In spite of the most careful observation, I have not yet become convinced that there is no other difference between Graves's disease and toxic adenoma than a difference in the degree of the hyperthyroidism. True, in most cases of toxic adenoma, hyperplasia is present also to some extent. But there are clinical features in which the two vary so widely, and so constantly, that it is rather difficult to think of them as merely different expressions of the same pathologic entity.

Type of Case.—I have operated on adenomatous goiters in a proportion of about three to one of exophthalmic goiter. Altogether, I have had only five malignant cases—a percentage of but six-tenths of one per cent. I can suggest no reason for this fortunate experience other than that luck has been with me.

DIAGNOSIS

Just a few words on diagnosis. It is important to know all that can be learned about the patient, as well as the malady, in every case. The time spent in eliciting the history in detail is well spent. The presence of a visible or palpable en-

* Read before Southern California Medical Association, November 4, 1933.

largement is not essential to a correct diagnosis of thyroid disease. A given case may even exhibit hypofunction, as shown by the basal metabolism reading, and yet be a genuine case of hyperactivity. In such instances the area of hyperplasia may be so limited or so located as to escape detection until the specimen reaches the pathologist. These border-line cases will often tax the diagnostic skill of the clinician to the utmost. Indeed, I am persuaded that patients of this class far too often fail to obtain the relief they seek, and should have, the ranks of the so-called neurotics thereby receiving many unhappy recruits.

PREPARATORY TREATMENT

The proper kind and duration of the preparatory treatment depend upon the nature of the disease process, the amount of damage it has already done, and the general condition of the patient. Adenoma cases, if nontoxic, usually require a minimum of delay and only the ordinary preparatory measures. When the psychic factor can be disregarded, the majority of these patients may be operated on to advantage under local anesthesia. In toxic adenoma it will often be found that more or less damage has been suffered by the vital organs, particularly the heart, due to the long and insidious course of the disease, sometimes extending over a period of years. Here arrhythmia, fibrillation, or other abnormal condition may necessitate prolonged rest in bed and complete digitalization. Obviously, inhalation anesthesia is to be employed in this class of patients with the greatest circumspection.

With a very few exceptions, I have derived no benefit from the administration of any form of iodine in adenomatous goiter. On the contrary, I am sure that more than once I have seen it do definite harm. Similar comments apply, and with equal force, to radiation as a preparatory treatment. When either of these agencies, iodine or radiation, is resorted to, the patient should be kept under close observation, preferably in the hospital.

The preparatory treatment in Graves's disease is a more complicated problem but, generally speaking, not a more difficult one. Here Lugol's solution is usually magical in its effect, provided that the patient has not been previously rendered iodine-immune by unwise therapy. When it fails, as will occasionally happen even when employed for the first time, radiation may be resorted to with some hope of temporary palliation. But I wish to emphasize in this connection that neither iodine nor the roentgen ray is to be regarded as curative in exophthalmic goiter, though both may sometimes serve useful purposes in selected cases.

I have practiced preliminary ligation only a few times in the past eight years or so. As a rule the iodine remedy accomplishes the same beneficent result with less danger to the patient. When iodine fails, however, ligation may be done under local anesthesia in a matter of ten or fifteen minutes, provided, of course, that the operator knows his anatomy thoroughly.

As experience in handling a given disease problem increases, one is apt to formulate for himself

certain rather fixed principles of guidance. Let me cite several of my own, with reference to the management of hyperplastic goiter. I am strongly averse to operating while the basal metabolism remains as high as plus 50, and the pulse rate, taken during sleep, remains persistently above 100. And I decline to operate, in any event, when the toxicity is definitely on the increase.

Undue loss of blood at operation seems to be especially detrimental in this type of case, probably because the patient is so often already partially dehydrated. And, unfortunately, this is the type in which hemorrhage is most likely to occur, due to increased vascularity of the parts. If it does not seem necessary to administer intravenous therapy prior to the operation, I insist that it shall be available for immediate use during the surgical work or upon completion of the operation.

Anesthesia.—I am convinced that general anesthesia should be employed in the majority of toxic cases, and particularly in Graves's disease. Complete unconsciousness is a distinct protection to these patients, for the reason that they are already overstimulated, and the sights and sounds of the operating room induce unfavorable reactions. In certain cases where the cardiac condition points to the advisability of local anesthesia, I endeavor to secure the desired state of unconsciousness by increasing the preliminary dosage of barbiturate and opiate.

The association of a skilled anesthetist I regard of paramount importance in thyroid surgery. I do not use ether in this work.

OPERATIVE PROCEDURES

The idea of the permanent scar to follow should be kept in mind both in making the incision and in closing it. It should only be long enough to permit speedy, accurate work, and the skin edges should be approximated with meticulous care. As experience increases, it will be found that shorter and shorter incisions will suffice. Patients appreciate small scars when they are to remain permanently visible, as in the case of women.

Section of the ribbon muscles is rarely necessary. When the tumor mass is unusually large, or is substernal in location, the additional room may serve to facilitate delivery of the tumor and thereby safeguard the patient. Since no appreciable damage results, one should not hesitate to adopt the expedient when indicated.

How much gland tissue is to be left? This is a troublesome question, and an answer sufficiently definite to form a reliable clinical guide is not possible. A remarkably small remnant of normal gland substance often proves adequate to maintain function perfectly, because nature usually meets the need promptly by compensatory hypertrophy. Personally, I feel that it is preferable to leave too little rather than too much gland. The daily administration of a thyroid tablet is certainly a lesser evil than a second operation. This is an especially sound principle in toxic adenoma, for one can never be absolutely sure that a lobe or area normal in appearance does not harbor additional foci, so small or so deeply placed that they cannot be

detected. It is estimated that recurrence takes place in some two or three per cent of all operated cases. This is a much larger proportion than has occurred in my own work, due solely, I am sure, to the fact that I believe in and follow the principle here set forth.

Hemostasis should invariably be as complete as possible before any suturing is done. No bleeding vessel is too small to be tied. I lost one patient from hemorrhage within a few hours of the operation, and was barely in time to rescue another from death by pressure suffocation due to slow oozing beneath the fascia, the nurse having failed to recognize the danger.

Drainage.—I have long since convinced myself that adequate provision for drainage is a wise precaution. Not only does it serve to give timely warning of imperfect hemostasis, but it also prevents troublesome accumulation of serum at subsequent stages. The period of after-attention may be somewhat prolonged by this item of technique; but such consideration is negligible as compared with the enhancement of the patient's safety and comfort.

Complications.—Collapse of the trachea is the most alarming complication met with in thyroid surgery. It is most apt to occur in long-standing cases of intrathoracic goiter of adenomatous type. Prolonged pressure occasionally results in partial absorption of the tracheal rings, and collapse ensues when the pressure is suddenly released. Prompt recognition of the true nature of the trouble and immediate tracheotomy are the only reliable means of averting disaster. I lost a patient on the table many years ago from failure to realize the danger in time; since then I have succeeded in saving several lives by prompt intervention. It is a good thing to know that a tracheotomy tube always has a place on the instrument tray.

Other accidents and complications of more frequent occurrence include hemorrhage, injury of the recurrent laryngeal nerves, injury or removal of one or more of the parathyroid bodies, and damage to the trachea or esophagus. Clean-cut, accurate working knowledge of the anatomy of the neck is obviously the only dependable means of avoiding these pitfalls.

Time.—The time consumed in the operation is a vastly important consideration. Speed, but not haste, is the desideratum. The operator who habitually consumes from two to four hours in the average thyroidectomy would do well to confine his attentions to other portions of the body, or better still, perhaps, to a less exacting occupation. The difference between one, and two or more hours in the operating time may well mean the difference between life and death in certain cases.

POSTOPERATIVE CARE

Aside from a few simple routine procedures, no such thing as a stereotyped system of postoperative care can be laid down. The kind and degree of reaction and the general condition of the patient must determine this. I always order the Fowler position, the immediate application of

an ice-collar, and the starting of proctoclysis or intravenous glucose as soon as the patient is returned to bed. Occasionally, a transfusion will best meet the indications, and such possibility should always be anticipated in highly toxic cases.

The quantity of postoperative opiate to be used varies widely. Often none is required. Nothing is allowed by mouth for the first twenty-four hours, and absolute quiet under close observation is enjoined in all cases.

Should acute hyperthyroidism supervene, it is best met by the external application of cold, and sufficient morphin to control pain and restlessness.

(The condition just referred to is not to be confused with surgical shock.)

IN CONCLUSION

Now, may I be pardoned if I add a few words of a statistical nature? My series of thyroidectomies shows a total mortality of twelve cases—approximately one and one-half per cent. This includes all cases operated on in my clinic at the Los Angeles General Hospital, about two hundred in number. As may be readily understood, a goodly proportion of these patients were far from first-class risks. The mortality rate for private patients, some six hundred in number, has been maintained at about one per cent.

The twelve deaths may be listed as follows:

Postoperative hemorrhage	1
Collapse of the trachea (on the table).....	1
Surgical shock (on the table).....	1
Cardiac failure (twenty-four hours post-operative)	1
Malignant cases (one on the table).....	2
Acute hyperthyroidism	6

Twice I have been so fortunate as to run a series of one hundred consecutive cases without a fatality.

Finally, let me say that, in my opinion, surgical judgment is the most important factor contributing to the success of thyroid surgery. A good operative technique may be acquired by practically anyone. But it is the possession of that intangible asset, surgical judgment, which distinguishes the surgeon from the mere operator.

947 West Eighth Street.

DISCUSSION

WALLACE I. TERRY, M. D. (384 Post Street, San Francisco).—Doctor Cooke has contributed an excellent paper on the surgery of the thyroid gland based on his own experience. As it was read before a general medical meeting, he did not, of course, give more than a general outline of his own observations as to etiology, diagnosis, pathology and treatment of goiter. There are so many details which a surgeon would like to know that I trust Doctor Cooke will contribute a further paper to some special surgical journal.

While I am in accord with most of his conclusions, I feel that his statement regarding the time consumed in performing a goiter operation is rather harsh. Anyone who had the great privilege of watching the late Doctor Halstead of Baltimore do a goiter or other operation realized that the time element was a relatively minor factor, provided that meticulous hemostasis, delicate handling of tissues and skillful anesthesia were employed. Hemorrhage, trauma, and poor anesthesia have more to do with the production of shock and other operative or postoperative complications than has the mere prolongation of an operation.

The use of drainage, except after the removal of deep-seated, particularly substernal goiters, it seems to me, is seldom necessary. I am confident that the author would only rarely use drainage in other clean operations. Thorough flushing of the wound with Ringer's solution, warmed to about 35 degrees centigrade, before final closure, will bring to light any untied bleeding points, and the use of very fine suture material will minimize wound reaction.

Doctor Cooke is to be congratulated on his low mortality rate, which will steadily decrease now that acute hyperthyroidism is better understood; for half of the deaths in his series were due to it.

The percentage of malignant goiters varies considerably in different localities—from less than one per cent to over seven; and in view of the fact that malignant goiter nearly always occurs on the basis of a pre-existing adenoma, Doctor Cooke should calculate his incidence as five cases in some six hundred adenomatous goiters, his proportion of adenomas to hyperplasia having been three to one.

It is interesting that he does not recall seeing any natives of the southern part of the state originate adenomatous goiters. It is apparently corroborative evidence for the iodine deficiency theory of their etiology.

✱

JOSEPH K. SWINDT, M. D. (279 South Thomas Street, Pomona).—In a review of these eight hundred cases of goiter, we find Doctor Cooke's experience leads him to conclusions which represent quite accurately the present opinions of most of our authorities on thyroid surgery. His mortality record, no doubt, indicates a fine operating-room technique, but this must also depend very largely upon a high degree of cleverness in the selection and preparation of the operative risks. I should like to elaborate upon his discussion of the various elements of the thyrotoxic state and the manner in which the degree of toxicity may be determined.

There are four groups of criteria by which the thyrotoxic status may be investigated and the degree of toxicity estimated. These concern the circulation, nutrition, elimination, and nervous equilibrium of the patient.

The circulation is fundamentally dependent upon the integrity of the myocardium. The pulse rate, blood pressure reading and electrocardiogram may give actual physical evidence of the condition of the myocardium; but much more significant evidence of compensation or decompensation of the goiter heart is to be derived from the absence or presence of such clinical signs as dyspnea, cyanosis, and edema.

The nutritional status involves the metabolic balance between storage and waste. Loss or gain of weight and basal metabolic readings are indicators of great value, but must be interpreted largely in the light of the water balance of the patient. To be waterlogged is equally as dangerous as to be dehydrated, and either condition is evident to clinical inspection. Glucose storage in the liver must be maintained by the intake of carbohydrates in abundance, and if waste is spilled over a low kidney threshold it should be checked by insulin.

Excretory competence depends on the functional capacity of the liver, kidneys, bowels, and skin; all of which are profoundly disturbed in long-standing thyroidism, especially in the insidious adenomas. The icteric index and the kidney function tests are indicative of impairment long before gross clinical evidence can be detected. Nausea and diarrhea should be sensed as compensatory processes, suggesting failing function in liver and kidney.

Thyrotoxicosis is indeed a nervous break-down, and patients so afflicted are often on the verge of a mental collapse, and need only the postoperative thyroid storm to drive them mad. This should be recognized and relieved, or at least anticipated before operation is performed. Some time before operation, the patient's reaction to sedatives should be tried out, so that the surgeon may have one at hand known to be agreeable and effective, to secure comfort during the storm.

Willard Bartlett recently wrote an article on "An Original Method of Estimating the Thyrotoxic State" (*Southern Medical Journal*, January, 1932). The method is based on the ability of a toxic patient to hold his breath in inspiration and expiration. The average normal individual holds his breath about forty seconds on inspiration and twenty seconds on expiration, a ratio of about two to one; while the toxic individual holds his for about twelve and ten, respectively, a ratio of about one to one. As the toxicity in a given patient lessens, this ratio of one to one will gradually approach that of two to one. Bartlett's studies reveal the fact that voluntary apnea may be regarded as a very good index of the circulatory status, self-control, basal metabolism, and other components of the clinical picture. The test is conducted under the same conditions as a basal metabolism test. It is, as Bartlett says, to some extent an all-embracing test, perhaps the most useful of all those at our command in estimating the condition of the thyrotoxic patient; and it costs nothing.

The toxic goiter case should never be subjected to an emergency operation. With a careful estimation of the degree of toxicity as I have described, and an equally carefully executed plan of preparatory treatment, it should be possible to maneuver any case into a position where there is vital capacity to endure a thyroidectomy. If this cannot be done the operation will be useless.

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CHARLES T. STURGEON, M. D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Cooke has presented a very clear résumé of his work, and I wish to congratulate him; first, in that it is not a statistical report, and second, that the mortality was as low as one and one-half per cent. When one considers that many of his patients were operated upon at the General Hospital, and that the majority of patients seen there are very ill and poor surgical risks, it is an excellent record.

Doctor Cooke reports a malignancy of only six-tenths of one per cent, and I agree with his statement that this can only be attributed to "good luck," as the various clinics report a percentage between two and three per cent.

An important question that arises in thyroid surgery is how to ascertain the amount of gland that should be left. There is no definite rule that one may follow, as this varies with individuals and in different types of goiter. The essential medium to be attained is between too great removal of the gland, with the resultant production of myxedema, or too little removal and the establishment of persistent hyperthyroidism. Therefore, it is only by experience and a careful post-operative follow-up of cases that you can formulate a workable theory, though there are a few guiding facts that can be stated.

1. In those cases of hyperplastic goiter where the symptoms respond very rapidly to iodine therapy and when, at the time of the operation, the cut surface of the gland appears grayish so that one knows that a certain amount of involution has taken place and the involution of the remaining gland following surgery will probably be complete; therefore, more of this gland should be left. In those patients who have not responded to iodine therapy, and in whom at the time of the operation the cut surface of the gland appears reddish brown, cellular and vascular in character, signifying that involution has not taken place, a lesser amount of thyroid tissue should be left.

2. In patients with adenomatous goiters considerable gland should be left, due to the fact that the remaining gland tissue is usually not very active and there is the danger of myxedema following surgery.

3. When operating upon elderly persons, relatively more thyroid tissue should be left than in young persons.

4. In hyperthyroidism in children, especially if the operation takes place before puberty, one should leave a larger portion of gland than that left in adults, as involution takes place in the hyperplastic gland just as definitely as in the adults, and myxedema is prone to follow if too much gland is removed. If one should

err, it is better to err on the side of conservatism, and so have a slight remaining hyperthyroidism rather than a myxedema.

✱

DOCTOR COOKE (Closing).—I greatly appreciate the expressions of all who have participated in the discussion. There is no occasion for self-defense, but I should like to make a few brief comments in closing.

Doctor Terry thinks my estimate of the proper time to be consumed in a goiter operation rather harsh. My statement was that speed, but not haste, is desirable; that the operator who habitually consumes from two to four hours in the average thyroidectomy—and there are such—imposes an undue hazard. Those sentiments I wish to maintain. In the average case the time required for the complete operation should not often exceed one hour. While hemorrhage, trauma, and poor anesthesia are certainly factors in the production of shock and other complications, I feel that the time element is equally, perhaps more, important. And this in spite of the surgical deliberateness of Doctor Halstead who, it must be remembered, passed from the arena of action before any large amount of goiter surgery was being done. If ideal conditions could be secured in every patient prior to operative attack, more or less additional time might not be of particular significance. But in toxic cases the threshold of resistance is so lowered that prolongation of the trauma and anesthesia beyond the minimum required for thorough work seems to me both unwise and unsafe.

Doctor Terry deprecates the use of drainage on the ground that it is not employed in other clean surgery. No other type of operation can be properly compared with thyroidectomy, where the drainage is of a special kind and excessive in amount. Drainage adds nothing to the danger involved. It does add an element of precaution, and it does promote the comfort of the patient. Doctor Terry's extensive experience makes what he says about Ringer's solution well worth considering.

I am in accord with all that Doctor Sturgeon says except his guiding point No. 2. In adenomatous goiter, it is often impossible to tell, either by sight or touch that small adenomas are not present in apparently normal gland tissue. To leave them is to invite future trouble. Myxedema is not the formidable condition it was wont to be regarded. As stated in the paper, I consider the swallowing of a tablet of thyroid extract several times a day a much less evil than a second operation. In this I am quite sure that most patients would enthusiastically agree.

Doctor Swindt's contribution to the discussion is most valuable. I am glad that he emphasized the importance of the preparatory treatment. In spite of the most careful efforts in this direction, however, the ideal condition cannot always be established. My own belief is that operation should not be withheld, if it offers the patient a reasonable chance in an otherwise hopeless case.

MALPRACTICE—AS AN ATTORNEY SEES IT*

By RALPH E. SWING, Esq.
San Bernardino

FEW lawyers, not many medical men, and no laymen, understand the conditions under which a physician, surgeon or dentist may be liable for improper treatment of a patient; and because of such lack of knowledge a great number of actions are improperly instituted against the members of these professions. Such liability is predicated upon a branch of negligence termed "malpractice," which means bad or unskillful practice, resulting in injury to the patient.

Malpractice may result from lack of sufficient knowledge and skill of the subject or situation confronting a physician, or from a failure to properly apply the knowledge and skill which a physician does possess. The rules covering malpractice actions are applicable alike to physicians, surgeons, and dentists; and while in this discussion I shall for brevity, refer only to physicians, what is said will be equally applicable to the other two professions.

CIVIL LIABILITY IN MEDICAL PRACTICE

The liability of a physician for malpractice may be either civil or criminal, but in this discussion I will only deal with the questions involving civil liability.

There are few actions for malpractice which are predicated solely upon a lack of knowledge or skill, although in these days of specialists, and of new and advance treatments, it may very well be a matter of some consequence.

In my experience, I have come in contact with but few cases which could finally be traceable to a lack of knowledge. In one of such actions a dentist had extracted an ulcerated tooth and, apparently due to lack of knowledge in the matter of administering hypodermics, he failed to exercise the degree of skill requisite for properly administering a hypodermic injection, and as a result thereof the patient suffered an infection which resulted in serious consequences, and in a substantial judgment against the dentist. His failure to take the proper precaution was due primarily to a lack of knowledge.

VALUE OF CONSULTATIONS

As a matter of caution, I can only say that when a physician is confronted with a situation with which he is not familiar he should not hazard a guess as to what to do. If the subject is one requiring the advice of experts, he should at once avail himself of their advice and services, or else refer the patient to someone possessing the requisite skill.

It has been repeatedly said that human life is too precious to be entrusted to a person lacking in skill or knowledge, and that when a physician is face to face with a critical condition that is new to him or that cannot be readily diagnosed, he should not venture a treatment or perform an operation on a mere hazard that it may be right. The rule that physicians are not liable for errors in judgment will not be available to him under such circumstances.

BASIS OF MOST MALPRACTICE CLAIMS

The great majority of cases predicated on malpractice grow out of the assumed negligence or failure to do or not to do the things which the condition of the patient required should or should not be done, and it is this particular phase of the subject to which I wish to direct your attention.

Permit me, however, first to say that a bad result is no evidence of negligence; yet in nine cases out of ten, the laymen, and not infrequently the physician himself, mistakes a bad result as conclusive evidence of negligence. It is reasonably

* Paper is by State Senator Ralph E. Swing.

* Read before the San Bernardino County Medical Society February 6, 1934.

safe to say that at least three-fourths of the cases predicated upon malpractice are the result of this misconception of the law. It starts usually from the dissatisfaction of a patient. The patient, being dissatisfied with the results, consults another physician; that physician sees the bad results, but has not the history of the case. Looking back he can see what might have been done, and which, if done, would have produced a different result. Inadvertently and unthoughtedly, or for some other reason, he criticizes the work of his fellow practitioner, and thereby plants the seed of discontent in the mind of the patient, which soon ripens into an imaginary grievance only to be satisfied by the institution of an action for malpractice.

IMPROPER CRITICISMS CAUSE OF MANY MALPRACTICE CASES

In nearly every case that has come under my observation,—and this covers a great number—I have found that the inadvertent criticism by a fellow physician of the work of his competitor was the inception of the thought which culminated in the action. This is unfortunate for the profession, for in spite of all precautions taken, mistakes will occur and errors in judgment will be made, which of themselves are no foundation for a cause of action.

So long as you are willing to criticize the work of your fellow practitioners, judging only from the results which you see and the statement of the patient, you may expect malpractice actions to continue to increase, and sooner or later the circle will be completed; then each of you will find yourself enmeshed in charges and accusations of improper treatment, and sooner or later you, too, will be a defendant in such an action. The dissatisfied patient is no respecter of persons.

CRITICS SHOULD FIRST BE SELF-CRITICAL

Before embarking upon a criticism of the work of your fellow physicians, hesitate, do not be too hasty, and make sure that you have a correct statement of the conditions under which the physician was working at the time the treatment was administered, and remember at all times that physicians are not guarantors of their work; they only agree to bring to the patient such skill and knowledge as they possess, and to apply that skill and knowledge in accordance with the usual and customary practice of physicians in that particular vicinity. They may make errors in judgment, but if they have the requisite knowledge and skill, and honestly apply it, yet make a mistake or commit an error, they are not liable for malpractice even though the patient may die or be permanently injured as a result of such error.

DEGREE OF PROFESSIONAL SKILL REQUIRED

Of course, the expert or specialist is held to a higher degree of skill than the ordinary practitioner. The specialist cannot escape so easily as can the ordinary country doctor; of the specialist a greater degree of care is expected, but each is tested by the same measuring stick, when it comes to the exercise of judgment. For if there are various recognized and approved methods of treat-

ment, the physician is at liberty to follow the one he thinks best suited for the patient, and he is not liable for malpractice because an expert or specialist in that particular line would have followed a different method, even though the method suggested by the specialist is a better one or the result would have been more satisfactory. If the physician uses the skill possessed by other physicians in similar localities and exercises that skill honestly, according to his best judgment, and with reasonable care according to the usual and customary practice in such community, he is not liable.

CAUTION CONCERNING NEW METHODS

Danger sometimes arises from the adventurous physician adopting a new method. One of the early cases in this county grew out of the use of a newly invented extension splint for the setting of broken bones in the leg. The fracture in this case was a bad one, the patient had rolled some distance down a hill and some gristle, or other substance, had slipped in between the ends of the broken bone and as a result thereof there was no union. The patient remained in bed for a long period of time and developed bed sores and generally had a bad result. This resulted in an action for malpractice, and it was only by a narrow margin that we succeeded in saving the doctors from an adverse judgment.

Yet, in this instance they were clearly not liable. They exercised their best judgment and skill, but perhaps selected an approved but too new a method. But a number of physicians, local and from other places, testified that the treatment was not such as they would have administered, and therefore, it was argued, malpractice had been established.

EXPERT MEDICAL TESTIMONY

Medicine not being an exact science, malpractice can only be established by the testimony of experts, that is, the testimony of medical men of the same or similar localities as to the practice there, and as to whether the treatment administered to the patient is in accordance with good practice as it is followed in such locality. Therefore, malpractice can never be established without the aid of the physician, for not having the testimony of physicians the plaintiff is without evidence to sustain a judgment.

Of course, there are a few rare exceptions to this rule. Those are where the doctrine of *res ipsa loquitur* applies. *Res ipsa loquitur* means:

That when a thing which causes injury is shown to be under the management of the defendant, and the accident is such as in the ordinary course of things does not happen if those who have the management use proper care, it affords reasonable evidence, in the absence of an explanation by the defendant, that the accident arose from want of care.

Where a patient receives a burn from a hot-water bottle, it requires no expert testimony to establish that such burn was the result of negligence. The same is true in cases where the burn is from a therapeutic lamp, and it is also applied where the burn resulted from x-rays. But with these few exceptions, the rule heretofore stated is the correct one.

NEGLIGENCE MUST BE CAUSE OF INJURY COMPLAINED OF

Of course, there is no liability for negligence unless the negligence produces the injury complained of. In other words, the negligence or malpractice must be the proximate cause of the injury, otherwise no recovery can be had; but whether or not the malpractice was the proximate cause of the injury is a question for the jury, and it is not at all difficult to convince a jury that a bad result was proximately caused by the negligent act of the physician. This but emphasizes the necessity for care on your part in giving expression to your thoughts when you observe a bad result.

RESPONSIBILITY FOR ASSISTANTS

One other thing should be touched on, and that is the liability of physicians for the negligence of nurses or other physicians. If the nurses or other physicians are under the control of the attending physician, he immediately becomes liable for their failure to exercise proper care and skill; but if they are acting independently and not under his control, legally he is not responsible, although in many instances the jury will not draw the distinction. Neither is a physician liable for the negligence of employees of a hospital except where he assumes to direct or control them.

In a very recent case, one of your local members was sued in connection with burns received while the person was a patient in the hospital. Legally there was no negligence on the part of the physician, and perhaps also none on the part of the hospital; but had the action against the physician gone to the jury, the jury would probably have failed to draw the distinction, and would have brought in a verdict against the physician as well as the hospital.

In that case, however, the court directed a verdict in favor of the physician; but in spite of the instructions, favorable to the hospital, a verdict was promptly rendered against the institution and some of the nurses, even though the institution was a charitable institution.

PROTECTION OF PHYSICIAN IN CHARITY HOSPITALS

May I now emphasize the necessity for physicians, when directing that their patients be confined in a hospital, to take ample precaution to protect themselves against the negligence of any employees of the institution? Especially is this true where the patient is confined in a charitable institution, which is not liable under our law for the negligent acts of its employees. When a patient suffers an injury while in a charitable institution, or there is a bad result, the physician will be the only one against whom the action can be maintained, and the inclination will be to charge him with being responsible for the conduct and action of the institution's employees. If the physician assumes control or directs the actions of the employees of a hospital, irrespective of its charitable character, he may become tainted with the negligence of the employees.

In the case just referred to, the patient was alleged to have been burned by a therapeutic lamp; and had the doctor so much as moved the lamp or directed its location or the time that heat should be applied, the directed verdict would probably not have been granted.

So you may readily see how important it is that you have a distinct understanding with the institution that you do not exercise any control or authority over its employees. Especially is this so where you have an emergency case, and are acting under high pressure and the stress of circumstances. If you assume control of nurses or assistants furnished you by an institution, it becomes your duty to see that they exercise care and caution in carrying out your instructions.

CAPTIOUS CRITICISM UNWARRANTED

In discussing the question of malpractice, I have had to resort to generalities, but there is one principle which, by bearing in mind, you will save not only your fellow practitioners but, likewise, yourself from much embarrassment. Such principle is: bad results are no evidence of negligence. Do not conclude too quickly that your competitor has failed to exercise proper skill simply because you see a bad result. There are few physicians who have not had a bad result, and if judged by that standard, perhaps most of you could be charged with having failed in the performance of your duty. Keep in mind that honest errors in judgment, even though such errors prove disastrous to the patient, do not render the physician liable. You should not assume that because you might have procured better results the attending physician was guilty of malpractice. Just remember that you are looking backward and are able to arrive at definite conclusions as to the character of the treatment which should have been administered; whereas the attending physician may have been enmeshed in the realm of uncertainties when determining his course of action.

IN CONCLUSION

We are too prone to criticize the work of one another, and that criticism may not infrequently be the cause of the institution of a groundless action. Hasty criticism, like the fertile seed of the mushroom, develops quickly into discontent, and discontent ripens into a desire to retaliate and to be compensated for the imaginary wrong. A patient in such mental condition, through the aid of a designing or perhaps misguided lawyer, will soon have you in court attempting to justify your treatment. Until you have gone through a trial and had the experience of explaining your bad result and of defending your treatment, you will never realize how it can be made to appear that you are the most incompetent, careless and negligent physician in the community. If you will but accord to your fellow practitioners the benefit of the doubt, and refrain from suggesting to a dissatisfied patient that proper treatment was not administered, you will have gone a long way toward suppressing the now popular pastime of suing the doctor if he insists on the payment of his bill.

Central Building.

SUBPHRENIC ABSCESS*

By H. BRODIE STEPHENS, M. D.

AND

ELLIOT ROUFF, M. D.

San Francisco

DISCUSSION by John B. de C. M. Saunders, F.R.C.S., San Francisco; Harold Brunn, M.D., San Francisco; Frank Stephen Dolley, M.D., Los Angeles.

THIS condition was described by Barlow as long ago as 1845, though the first operation for a subphrenic abscess was not performed until 1879 by von Volkman. In 1908 Barnard's comprehensive paper appeared; it was based on a study of seventy-six cases at the London Hospital and contained a complete description of the anatomical boundaries of the subphrenic spaces. Since that time a great number of articles on this subject have appeared in the literature, many of them revealing a lack of knowledge of the true anatomy of the subphrenic spaces. In 1926 Fifield and Love reported seventy-eight consecutive cases from the London Hospital and described classically, as did Barnard, the anatomical divisions of the subphrenic area. It is essential to visualize the true subphrenic spaces if the etiology and sequelae of subphrenic suppuration are to be clearly understood and rational treatment is to be instituted.

ANATOMY

There are six areas immediately beneath the diaphragm where collections of pus will localize. Two of these are extraperitoneal, while the remaining four are intraperitoneal; there are three on the left side and three on the right. The abdominal surface of the diaphragm is covered by peritoneum except in one place, where it is in contact with the "bare area" of the liver. This is known as the *right extraperitoneal subphrenic space* (Fig. 1). It is bounded anteriorly by the right lobe of the liver and the right suprarenal body, posteriorly by the diaphragm, to the left by the inferior vena cava and right crus of the diaphragm, above by the anterior layer of the coronary ligament, below by the posterior layer of this ligament, and to the right by the meeting of these layers to form the right lateral ligament. Anteriorly the cellular tissue of the right extraperitoneal space is continuous over the top of the liver with that of the falciform ligament, and inferiorly with that behind the ascending colon and right lumbar fossa; around the arcuate ligaments it is continuous with the cellular tissue of the thorax.

The formation of an abscess in this space may result from infection in the liver and biliary passages; it may arise from the abdominal wall by way of the lymphatics around the epigastric vessels, which are continuous with those in the falciform ligament; it may originate in the right retroperitoneal tissues following perforation of a



Fig. 1.—Posterior view of the subdiaphragmatic spaces, showing the bare area of the liver or right extraperitoneal space, the left extraperitoneal space, the right anterior and posterior intraperitoneal spaces, with the communicating pathway around the triangular ligament of the liver and the upward prolongation of the left posterior intraperitoneal space or lesser sac.

posterior duodenal ulcer, retrocecal appendicitis, ulceration of the ascending colon or hepatic flexure, a high perinephric abscess, or pancreatic suppurative, and from supradiaphragmatic conditions such as empyema, pulmonary abscess, and bronchiectasis.

It is well to keep in mind the fact that suppuration in this space can spread forward between the layers of the falciform ligament and be present in the epigastrium. Such a condition, if recognized, can be drained readily by an anterior incision which will obviate contamination of either the pleural or peritoneal cavities.

Anatomically, the *left extraperitoneal space* does not exist. Occasionally, however, a left extraperitoneal abscess will form about the upper pole of the left kidney, extending upward and stripping the peritoneum off the diaphragm. Such a condition has been reported as arising from the rupture of a posterior gastric ulcer in the pres-

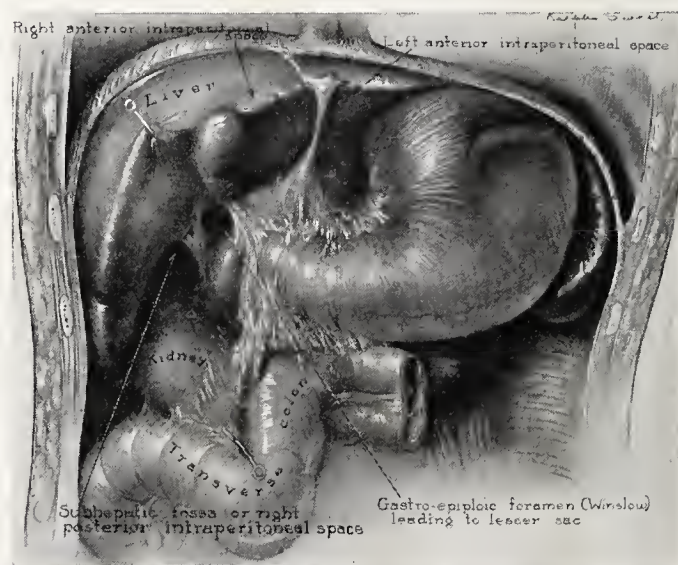


Fig. 2.—Anterior view of the subdiaphragmatic spaces, showing the right anterior and posterior intraperitoneal spaces, the left anterior intraperitoneal space, and the foramen of Winslow, the latter connecting the subhepatic fossa with the lesser sac.

* From the department of surgery, division of thoracic surgery, University of California Medical School.

* Read before the General Surgery Section of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

ence of an obliterated lesser sac, from a high perinephric abscess and from perforation of a carcinoma of the lower end of the esophagus.

In front of and above the right extraperitoneal space is the *right anterior intraperitoneal space* (Fig. 2). This lies between the superior, anterior, and right lateral surfaces of the right lobe of the liver, and the corresponding portion of the diaphragm. It is limited posteriorly by the anterior layer of the coronary ligament and the right lateral ligament, and to the left by the falciform ligament, and is continuous with the right posterior intraperitoneal space around the border of the right lateral ligament and the margin of the liver. This space communicates freely with the paracolic groove, the latter forming a direct pathway of infection to this space from the region of the appendix.

Below the right extraperitoneal space and somewhat anterior to it, is the *right posterior intraperitoneal subphrenic space*, or subhepatic fossa. It is pyramidal in shape and is bounded on the right by the right lobe of the liver and the diaphragm, and on the left by the foramen of Winslow and the duodenum; through the foramen it communicates directly with the lesser sac, or left posterior intraperitoneal subphrenic space; anteriorly, it is bounded by the liver and gall-bladder, and posteriorly by the upper pole of the kidney and the diaphragm.



Fig. 3.—The common routes by which infection spreads to the three right subphrenic spaces from suppuration in the appendix. (Modified from Fifield and Love.)

When an abscess is present in this space, it is separated from the left anterior subphrenic space by adhesions between the left lobe of the liver and the anterior surface of the stomach, and from the general peritoneal cavity by adhesions between the right lobe of the liver, the abdominal wall, the transverse colon and the greater omentum.

A subhepatic abscess may follow suppuration or perforation of any of the abdominal viscera, and purulent collections probably occur more frequently in this space than in any of the others (Tables 1 and 2. Fig. 3).

The *left anterior intraperitoneal space* is bounded above by the diaphragm, behind by the left lateral ligament, the left lobe of the liver, the gastrohepatic omentum and the anterior surface of the stomach, below by adhesions between the stomach

or greater omentum and the anterior abdominal wall or diaphragm, to the right by the falciform ligament, to the left by the spleen, the gastro-splenic omentum and the diaphragm, and anteriorly by the diaphragm and the anterior abdominal wall.

An abscess in this space often is termed "perigastric" or "perisplenic," and results, as the name implies, from perforation or suppuration in these organs.

The *left posterior intraperitoneal space* is the lesser sac. It is limited below by the transverse colon, anteriorly by the lesser omentum and stomach, posteriorly by the pancreas and left kidney; above it extends between the liver and the diaphragm as far as the bare area of the liver.

An abscess in the lesser sac may be the result of perforation of a posterior gastric ulcer or an extension of infection from the pancreas, spleen, or liver.

SOURCES OF INFECTION

Subphrenic abscess results, in by far the majority of cases, from disease of the stomach, appendix, hepatic or biliary systems, or duodenum. Disease of the stomach and appendix account for over 50 per cent of the cases (Table 3).

SYMPTOMS, SIGNS, AND DIAGNOSIS

Since subphrenic abscess is a complication rather than a primary disease, the history of the original infection is of the greatest importance in diagnosis. The primary disease is usually one for which surgery has been undertaken. Following operation, there ordinarily is an interval of improvement, lasting from a few days to weeks, or even a number of months, after which the patient again exhibits signs of toxemia and infection. General malaise, loss of appetite, irregular temperature and drenching sweats, accompanied by a varying degree of soreness on the involved side, comprise the major symptoms. Actual pain over the affected area is not common, though pain radiating to the corresponding shoulder is not infrequently the chief complaint.

Physical signs vary with the size and position of the abscess. If the abscess is situated anteriorly, a tender mass may be palpable high in the epigastrium or just under the costal margin. The posterior abscess frequently causes a slight bulging in the flank, and tenderness can be elicited when pressure is made over the region of the lower ribs on that side. Examination of the chest reveals some limitation of motion on the involved side, evidence of a high diaphragm, impaired percussion note, which may be caused by pulmonary compression from below, pleural exudate or even empyema from a lymphatic spread through the diaphragm, or actual perforation. In approximately one-third of the cases, free gas is present in the involved subphrenic space so that there are varying zones of resonance. These vary from that of normal lung above, through the impaired resonance caused by fluid in the pleural cavity, or pulmonary compression, and tympany of the gas

TABLE 1.—Relative Incidence of Involvement of Subphrenic Spaces

FIFIELD AND LOVE, 78 CASES, 1926							
Cause	Right Extra-peritoneal	Right Anterior	Right Posterior	Left Anterior	Left Posterior	Left Extra-peritoneal	Total
Appendix	12	6	12	....	..	..	30
Perforated duodenal ulcer	1	3	5	2	1	..	12
Perforated gastric ulcer .....	....	2	3	3	4	..	12
Operations on stomach .....	....	....	1	8	..	..	9
Total of all cases.....	20	13	29	14	7	1	....
BARNARD'S 76 CASES, 1908							
Gastric ulcer .....	....	4	1	16	2	1	24
Appendix	1	10	6	1	..	0	18
Hepatic abscess	15	7	1	1	..	..	24
Duodenal ulcer	2	1	2	1	..	..	6
Total of all cases.....	19	27	10	30	3	4	....

bubble, to dullness over the abscess contents, merging into the dullness of the liver.

Roentgenograms and fluoroscopic examinations offer the greatest aid in arriving at the correct diagnosis. The high fixed diaphragm, with or without a subphrenic collection of gas, and frequently with the presence of pleural fluid, are the diagnostic roentgenographic findings.

Often, too, following an upper abdominal operation, the diaphragm on the operated side assumes a high position. If a subphrenic abscess is suspected in such a case, there may be great difficulty in determining whether the pathologic process lies above or below the diaphragm. Artificial pneumoperitoneum under such conditions often will be of great value in localizing the disease process. If the injected air outlines the peritoneal spaces between the liver and diaphragm, one may be certain that the process lies within the pleural cavity.

TREATMENT

The complication of subphrenic abscess carries with it a very high mortality; the death rate is as

high as 100 per cent among those patients who are not operated upon, and averages about 30 per cent among those who submit to surgery. Therefore, prophylaxis is our first concern in surgery of the acute abdominal condition. This is best accomplished by early recognition of an operation on suppurative or perforative conditions within the peritoneal cavity, careful walling off of the subhepatic fossa in operations on the stomach and gall-bladder, and dependent drainage of this area when infection is already manifest. In suppurative appendicitis, particularly in those instances in which the appendix lies in the paracolic groove with its tip pointing toward the diaphragm, a drain through the loin will do much toward preventing a spread of infection to the subphrenic area. The high Fowler's position is, of course, the best means of preventing the transference of infection by gravity from below upward.

The actual treatment of the abscess, including the diagnostic search for pus with the aspirating needle, always should be carried out in the operating room so that, in the event pus is found by

TABLE 2.—Relative Incidence of Involvement of Subphrenic Spaces, Stephens and Rouff, 27 Cases, 1933

Location of Primary Cause	Right Extra-peritoneal	Right Anterior	Right Posterior	Left Anterior	Left Posterior	Left Extra-peritoneal	Total
Stomach cancer and ulcer	0	1	1	4	1	0	7
Duodenum	0	1	1	0	1	0	3
Appendix	0	2	4	0	0	0	6
Liver	0	3	2	0	0	0	5
Gall-bladder	0	2	1	0	0	0	3
Spleen	0	0	0	2	0	0	2
Total of all cases.....	0	9	10	6	2	0	27

Cases of subphrenic abscess occurring at the University of California Hospital from 1913 to 1932, and on the University of California Service at the San Francisco City and County Hospital between 1919 and 1932.

TABLE 3.—Percentage Figures of the Principal Primary Causes in 706 Cases of Subphrenic Abscess

	Authors'	Fifield and Love	Doberty and Rowland	Gatewood	Whipple	Peery	Korte	Maydl	Perutz	Average Per Cent
Stomach and duodenum.....	.42	.41	.47	.34	.14	.10	.21	.26	.33	.36
Appendix	.21	.35	.25	.24	.10	.38	.45	.15	.26	.26
Liver and Gall-bladder.....	.28	.06	.08	.17	.35	.10	.03	.12	.08	.10

the latter method, adequate drainage may be instituted immediately. When a palpable mass is present, incision directly over it is the simplest and most adequate means of drainage. When the abscess is enclosed completely by the rib cage, the problem is to obtain adequate drainage without gross contamination of either the pleural or the peritoneal cavity. The methods of Nather and Ochsner, Lockwood, and Elkin, all have their definite indications, depending upon the position of the abscess, with, it seems to us, little difference in the subsequent morbidity or mortality figures.

384 Post Street.

DISCUSSION

JOHN B. DE C. M. SAUNDERS, F. R. C. S. (University of California Medical School, San Francisco).—The surgery of subphrenic abscess largely rests upon an appreciation of the anatomical boundaries of the intra- or extraperitoneal spaces, or potential spaces, which lie beneath the diaphragm. Doctors Stephens and Rouff have, therefore, wisely opened up their paper with a clear description of the anatomy of these areas, employing the valuable classification introduced by Barnard, twenty-five years ago. Apart from the spread of infection to these spaces, via the lymphatics, and the effects of gravity, the existence of a negative pressure in the subphrenic region and the movements of respiration are important factors. This suction effect can be readily demonstrated in the hepato-renal pouch when the liver is elevated at operation. It is clear from a consideration of these spaces that an abscess in some of these areas is not so likely to give definite evidence of its presence as those in other positions. It is this variation in position, in signs and in symptoms, which often makes a diagnosis exceedingly difficult, and on occasion the only indication of the development of the complication is the general aspect of the patient and his failure to make progress.

Retardation of the movements and a significant rise in the diaphragm are almost always to be found after abdominal section. This elevation of the diaphragm, postoperatively, may persist for several days and be a further cause of confusion.

From the frequency with which the signs and symptoms are equivocal, variations of position, and the high mortality in unoperated cases, subphrenic abscess is a complication against which the surgeon should ever be on his guard.

There can be no question that a correct appreciation of these areas, and their efficient isolation by packing, is the major prophylactic measure.

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HAROLD BRUNN, M. D. (384 Post Street, San Francisco).—Subphrenic abscess is not an uncommon complication following surgical operations in the abdomen. Both clinically and radiologically, it is not easy of diagnosis. It is therefore essential that a great deal of consideration be given to this disease in order that unnecessary operations may not be done.

This complication occurs most commonly from perforating ulcers of the stomach or duodenum, from

perforations or infections of the gall bladder which have perforated, and from suppurative appendicitis. During the convalescence from any of these conditions a continued temperature, septic in type, with a high leukocyte count, always leads one to suspect the possibility of a subphrenic abscess. Not infrequently the x-ray more or less tends to substantiate this possibility, enough so to demand exploration. After careful search, however, the abscess may not be present.

On the other hand, certain cases are very easy of diagnosis, presenting all the typical features with the fluid level, air bubble above it, and a change in position of the fluid level when an x-ray is taken with the patient on the side. The presence of fluid in the pleura above the lesion is quite constant and only tends to make the diagnosis more difficult.

The injection of air into the peritoneal cavity will frequently help in avoiding an unnecessary operation. Its appearance above the liver gives evidence that this space is free of any fluid. We are convinced that in some cases there is a slight infection under the diaphragm which produces lack of movement and pain, yet clears up without going on to abscess formation, leaving behind adhesions and a perihepatitis.

The early stage of this condition is very difficult to diagnose, and we believe it wise to allow the condition to develop before undertaking an operation.

The knowledge of the spaces surrounding the diaphragm and the liver, which this paper has so ably presented, is quite essential both for diagnosis and treatment, because the third difficulty is the placing of the incision in the proper place in order to find the abscess. Frequently abscesses are overlooked entirely and their tendency is to break through the diaphragm into a bronchus, thereby emptying themselves.

The essential features, therefore, for diagnosis are a high diaphragm, fixation of the diaphragm, the use of pneumoperitoneum and the presence of fluid in the pleura above the diaphragm.

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FRANK STEPHEN DOLLEY, M. D. (427 South Arden Boulevard, Los Angeles).—Doctors Stephens and Rouff's exposition of the possible anatomical limitations of purulent collections immediately beneath the diaphragm, in relation to the likely sources of such infection, is admirable. Usually there is local symptomatic silence in the presence of subphrenic abscess. It is highly important to remember that malaise, loss of appetite and unexplained fever occurring during convalescence, following an abdominal suppurative process with leukocytosis persisting higher than one should expect during recovery, may well mean subdiaphragmatic suppuration. With the knowledge usually gained at the abdominal operation of the location of the original inflammatory process, its possible presence and probable location may be considered. Even with careful consideration, diagnosis is often difficult. The diaphragm is often not markedly elevated. It is the rule for it to be immobile or to lag behind its mate. This, however, occurs often following intra-abdominal inflammation. When, however, by elimination of other possible causes, the diagnosis rests between a subphrenic abscess accessible by suprahepatic approach and an intra-abdominal purulent collection to be approached from below, exploratory needling to eliminate the probability of the former should be

undertaken before exploratory laparotomy for the latter.

1. For the right extraperitoneal subphrenic space, just above the eleventh rib and just mesial to the scapula line;

2. For the right anterior and posterior intraperitoneal spaces an abscess limited entirely to one or the other is not readily accessible to needle exploration.

Fortunately the abscess usually is not limited strictly to the anatomical space first involved, but extends forward or backward over the dome of the liver. The pus, then, may be obtained either through the tenth interspace at the posterior axillary line or the ninth or tenth at the midaxillary line. It is fortunate that right subphrenic abscesses do not long remain limited to their anatomical subdivisions, for their precise recognition so limited would be very difficult.

On the left, however, their ligamentous boundaries are more closely drawn. Extension is much later. Location is usually accomplished through an upper abdominal exploration. Drainage then can often be obtained by a secondary incision directly down upon the abscess, either anteriorly or latterly.

A negative x-ray does not eliminate the possibility of subphrenic abscess, and when all other causes of continued sepsis are reasonably well excluded, exhaustive search for subphrenic suppurative should be carried through. It is too often found at autopsy.

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DOCTOR STEPHENS (Closing).—Subphrenic abscess will occur on the right side in the majority of cases, and the right posterior subphrenic space is the most frequent localizing site of the purulent collection. The incision described by Ochsner has much in its favor for drainage of the right posterior space, since both superior and inferior abscesses can be drained through this route without entering the pleural cavity at any time. The right and left anterior space collections can be drained extraperitoneally in the manner described by Clairmont, while a collection in the lesser sac will require a transperitoneal approach; but fortunately this latter site is but infrequently involved.

CHRONIC SINUS INFECTION—A NEW METHOD FOR ITS TREATMENT

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DISCUSSION by Albert P. Krueger, M. D., Berkeley;
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THE current attitude of both the lay and professional public reflects dissatisfaction with the surgical treatment of chronic sinus infections. To the otolaryngologist this is particularly true in cases presenting no marked tissue changes, and in instances of infection of the posterior series of sinuses where adequate drainage is difficult to obtain, and where end-results are frequently unsatisfactory to the patient, even though gross evidence of infection may be completely eradicated. In view of this situation, and after a considerable experience with nasal surgery, the writer has been inclined to view more tolerantly measures directed at the immunization of the patient. The procedure devised by Dr. Albert P. Krueger of the University of California, for local and general immunization seemed particularly well suited to this end, and the present paper details my experience with it.

A NEW METHOD AND ITS RATIONALE

Doctor Krueger has reported elsewhere a method for the preparation of undenatured bacterial anti-

gens^{1,2} which have been employed for local and systemic immunization or desensitization. These materials have given very promising results in the treatment of allergic rhinitis, and I began some fourteen months ago to apply the method in cases of chronic sinus infections. It is not possible to discuss here the detailed process of preparation or the theoretical background involved. For a fuller discussion of these subjects, the reader is referred to the papers of Doctor Krueger and his colleagues.^{3,4,5} Suffice it to say that cultures are taken in the usual fashion from the nasal tract and are immediately seeded into broth and brain suspension media. After a short period of incubation, the tubes are plated out on whole-blood agar and chocolate agar; from these plates the pathogenic forms are isolated. Mass cultures are grown, harvested in Locke's solution of pH 7.0, and are thoroughly washed in several changes of the solution. The cells are then disrupted in a special ball mill⁶ and the suspension is filtered through acetic collodion ultrafilters.⁷ The essential points in this technique are:

1. Exclusion of metabolites by means of thorough washing of the cells before maceration.
2. Avoidance of alterations in the cellular antigens by exclusion of heat or chemical treatment.
3. Removal of viable bacterial cells with the ultrafilters.
4. Standardization of the solutions on the basis of nitrogen content.

Local immunization or desensitization is accomplished by direct application to the diseased tissues. At the same time, general systemic treatment is carried on with intradermal and subcutaneous injections.

In use the method is not only logical but practical. We are dealing with infections located in cavities, which to all intents and purposes are practically closed; very often they cannot be satisfactorily treated surgically, either because of their location or because of the inevitable end-results of surgery which tend to make the patient uncomfortable. It is not possible to employ ordinary antiseptic solutions in the sinuses, for practically all of them produce local inflammatory reactions when left in contact with mucoperiosteum for any great length of time. Even a normal sinus requires several hours to empty itself; if the lining membrane has become diseased, this time may be prolonged to days; and for that reason even a mild chemical irritant may induce distinctly harmful changes. Further, histological evidence shows that the attacking microorganisms are deep in the tissues, and we cannot expect to reach them with antiseptic solutions.

Granting that radical operative procedures suffice to completely strip the diseased mucoperiosteum from the supporting structures, and that the new mucoperiosteum which replaces the removed tissue is normal, it is still to be remembered that the new lining membrane not infrequently becomes infected from residual diseased foci in the ethmoidal or sphenoidal cells. The alternative of entire eradication of every diseased cavity is not warranted, in the writer's experience, and this

attitude is reflected in the more recent writings of some of the early radical operators.⁸

In applying endoantigen therapy to this special field, the attempt is made to produce local and general immunization or desensitization of the host's tissues. The topical application of the antigen is not expected to produce an antiseptic effect; it evokes rather a cellular response characterized by the appearance of a purulent exudate in which polymorphonuclear leukocytes of highly phagocytic efficiency are evident. This effect is reinforced by the development of general tissue immunity, which apparently is more effectively produced by this type of antigen than by the orthodox autogenous vaccine.^{3, 4}

DOSAGE AND ADMINISTRATION

For the past year the writer has used the following procedure in administering the treatment. Beginning with the weaker solution, the antigen is administered hypodermatically three times weekly, the first dose being 0.1 cubic centimeter intradermally, and 0.1 cubic centimeter subcutaneously. It has been found more satisfactory to make these injections in two separate areas, two or three inches apart. The intradermal dose remains the same throughout the treatment, while the subcutaneous dose is raised as rapidly as possible to the maximum, usually from 0.5 to 0.8 cubic centimeters. Four or five maximum doses of this weaker solution are given. Care should be exercised always to remain just below the reaction dosage. Reactions are rarely encountered and are never severe, but we feel that treatment is more satisfactory when they are avoided entirely. The stronger solution is now substituted and the same procedure followed. The entire course requires ten to fourteen weeks to complete.

A fixed scale of dosage, applicable to all patients, has not been found feasible. Increase or decrease must be regulated with each patient according to the subjective general and objective nasal symptoms presented. The writer has found that an increase of 0.1 cubic centimeter in each successive subcutaneous dose represents the usual limit of tolerance without reaction. Care should be taken not to exceed the maintenance dose, which has been found to be just below the reaction dosage.

The lysate is administered simultaneously with the antigen by local application to the nose and sinuses about every fourth to sixth day. Where the posterior series of sinuses are involved, it has been my practice to give the nasal mucous membranes a preliminary shrinking with cocaine and adrenalin, then to fill the sinuses by the Proetz displacement method. The antra are more satisfactorily reached by direct injection through the normal openings, through windows if present, or by puncture beneath the inferior turbinate.

Some local reaction may be expected following the first three or four nasal applications, usually manifesting itself by a mild degree of nasal obstruction, and possibly by a slight headache, which may persist for an hour or so. In many cases it has been found advantageous to add a few drops

of 3 per cent aqueous solution of ephedrin to the lysate just before instilling. However, a few patients will be encountered who will present a typical ephedrin reaction when this is done.

Since the first response of the tissues to this treatment is phagocytic in nature, one of the early signs of favorable reaction will be an increase in the amount of discharge from the sinuses and a change to a definitely purulent character of discharge, even though originally it may have been mucous or mucopurulent in character. This discharge soon becomes clearer and gradually begins to disappear.

REPORT OF CASE

A typical case history follows.

Mrs. C., housewife, age 30, entered the office complaining of almost continuous head colds, constant postnasal dropping, nasal obstruction, anosmia, and somewhat irregular headache. All of these symptoms had been present for about five years. Treatment with nasal sprays, drops, and packs had given no relief. Examination, made November 23, showed the tonsils out clean, the pharyngeal columns reddened, and the posterior pharyngeal wall granular; the nose was negative, except for injection of both middle turbinate tips and the presence of mucopurulent secretion under both middle turbinates. Roentgen examination showed increased density in both antra, especially the right, and slight thickening in the ethmoids and frontals. On November 28, puncture and irrigation of the right antrum revealed a very small amount of muco-pus. On the same date nasal cultures were sent to Doctor Krueger. These showed a heavy growth of Gram-negative microaerophile rods (which would grow on chocolate agar only) and large numbers of *Staphylococcus aureus hemolyticus*. The antigen and lysate were prepared from these organisms, and treatment was begun on December 5. In all, twenty-six injections of antigen and ten local applications of lysate were given, the treatment being finished February 3. Eight months after the completion of treatment, the patient reported that she felt better than she had in years, that she had no postnasal discharge and no headache, had regained a very satisfactory sense of smell, and had had but one slight head cold, even though constantly exposed for two months last winter.

ANALYSIS OF TABLE

There is presented herewith a tabulation of forty-five cases treated by this method. While the series is short, it seems sufficient for the drawing of certain conclusions concerning the value of this method.

The frequency of involvement of the various sinuses was as follows:

Ethmoid sinuses	36
Maxillary sinuses	18
Sphenoid sinuses	16
Frontal sinuses	2
Pansinusitis	4

Principal complaints in order of frequency were:

Postnasal discharge	25
Frequent colds	18
Headache	16
Arthritis	13

Nasal cultures were taken from both nasal fossae in all cases and showed the following pathogenic organisms:

<i>Staphylococcus aureus</i>	in 38 cases
<i>Streptococcus</i>	in 26 cases
<i>B. pyocyaneus</i>	in 6 cases
<i>B. coli</i>	in 3 cases
<i>Pneumococcus</i>	in 3 cases
<i>Meningococcus</i>	in 2 cases

TABLE 1.—A Tabulation Concerning Forty-five Patients Treated by the Method.

Case	Sex	Age	Occupation	Complaint	Diagnosis	Previous Surgery	Organisms	No. of Treatments	Improvement First Noted	Condition When Last Seen
1	F	34	Teacher	Continuous colds; nasal crusting; foul breath. General feeling of ill-being.	Bilateral ethmoiditis and sphenoiditis; beginning atrophic rhinitis; Pharyngitis sicca.	Tonsillectomy. Submucous resection.	Staphylococcus aureus hemolyticus. Microaerophilic Streptococci.	34	1 week	Nasal tissues moist and normal; pharynx improved; no nasal crusting; breath sweet. No colds in 5 months.
2	F	38	Housewife	Chronic nasal catarrh.	Antritis right. Ethmoiditis bilateral.	Tonsillectomy.	Staphylococcus aureus non-hemolyticus. Type Gamma Streptococcus; Satellite hemophiles.	28	10 week	No abnormal secretion present. Patient not aware of any general improvement.
3	F	56	X-ray technician	Periodic conjunctivitis. Frequent colds. Very frequent frontal headaches. Profuse mucopurulent discharge.	Ethmoiditis chronic right. Antritis bilateral.	Bilateral nasointral windows. Bilateral partial ethmoidectomy.	Type Alpha hemolytic Streptococci. Streptococcus viridans.	38	2 week	No eye symptoms. No colds. Nasal discharge greatly decreased. Occasional light headaches.
4	F	52	Housewife	Post-nasal dripping. Frequent colds. Arthritis.	Ethmoiditis chronic bilateral. Sphenoiditis chronic bilateral. Antritis left.	Tonsillectomy.	B. pyocyaneus. Type Alpha hemolytic Streptococci. Staphylococcus aureus.	38		Nasal symptoms greatly improved. Arthritis unchanged.
5	F	29	Housewife	Periodic conjunctivitis. Frequent colds. Post-nasal dripping.	Sphenoiditis chronic right. Ethmoiditis chronic bilateral.	Tonsillectomy.	Type Alpha hemolytic Streptococci. Staphylococcus aureus. Few Gram-hemophilic rods.	34	6 week	Eyes normal. No colds. Post-nasal discharge greatly reduced.
6	M	46	Insurance Agent	Constant nasal obstruction. Frontal headaches. Much post-nasal discharge. Hay fever.	Ethmoiditis chronic right.	Bilateral middle turbinectomy. Bilateral partial ethmoidectomy. Repeated antrum irrigations.	Staphylococcus aureus hemolyticus. Type Gamma Streptococci.	36	5 week	Nose clear. Greatly reduced secretion. No headaches.
7	M	22	Clerk	Headaches. Frequent colds. Generalized mild arthritis.	Pan-sinusitis chronic left.	Tonsillectomy. Submucous resection.	Staphylococcus aureus hemolyticus. Unidentified actinomyces.	39	4 week	No headaches. No arthritis. Great improvement in general health.
8	M	26	Physician	Frequent colds, always ending in acute sinus complications.	Antritis chronic bilateral. Ethmoiditis chronic bilateral.	Tonsillectomy.	Staphylococcus aureus hemolyticus. Type Alpha hemolytic Streptococci.	39	2 week	No colds. No post-nasal dripping. No sinus symptoms.
9	M	26	Salesman	Periodic nasal obstruction, accompanied by conjunctivitis.	Antritis purulent left. Ethmoiditis chronic bilateral.	Tonsillectomy.	Type Gamma Streptococci. Type Alpha hemolytic Streptococci.	27	3 week	Nasal fossae clear. No recurrence of eye symptoms.
10	F	40	Beauty parlor worker	Post-nasal discharge. Headaches. Frequent colds.	Antritis chronic bilateral. Sphenoiditis chronic bilateral. Frontal sinusitis chronic bilateral.	Tonsillectomy.	Type Alpha and type Beta hemolytic Streptococci. Staphylococcus aureus.	32	3 week	No post-nasal discharge. No headaches. Gained eight pounds weight. Feels much better.
11	F	25	Housewife	Dull headaches. Continuous toxic feeling. Copious post-nasal discharge.	Antritis chronic bilateral. Incipient atrophic rhinitis.	Tonsillectomy. Bilateral nasointral windows. Bilateral partial inferior turbinectomy.		38	2 week	No headaches. Very little post-nasal discharge. A feeling of well-being not known for several years past.
12	F	36	Housewife	Periodic headaches. Constant post-nasal discharge. Arthritis.	Ethmoiditis chronic bilateral. Sphenoiditis chronic left.	Tonsillectomy.	Staphylococcus aureus hemolyticus. Type Alpha hemolytic Streptococci.	26	6 week	No headaches. Greatly reduced post-nasal discharge. Arthritis still present.
13	M	29	Laborer	Recurrent corneal ulcers.	Antritis-chronic bilateral. Ethmoiditis chronic bilateral.	Tonsillectomy. Caldwell-Luc bilateral.	Pure culture of Staphylococcus aureus hemolyticus.	29	5 week	No nasal or ocular symptoms.
14	M	40	Teacher	Constant post-nasal discharge. Frequent colds. Periodic cough.	Antritis chronic polypoid bilateral. Ethmoiditis chronic bilateral.	Caldwell-Luc bilateral.	Staphylococcus aureus hemolyticus. Streptococcus viridans.	36	4 week	No cough. No colds. Greatly decreased post-nasal discharge.
15	F	36	Music teacher	Generalized mild arthritis. Constant moderate post-nasal discharge.	Ethmoiditis chronic bilateral.	Tonsillectomy.	Staphylococcus aureus hemolyticus. B. pyocyaneus.	25	2 week	No arthritis. No post-nasal discharge.

Case	Sex	Age	Occupation	Complaint	Diagnosis	Previous Surgery	Organisms	No. of Treatments	Improvement First Noted	Condition When Last Seen
16	F	28	Laboratory technician	Furuncles in nasal vestibule. Postnasal dripping.	Antritis chronic left. Ethmoiditis chronic bilateral.	Tonsillectomy.	Staphylococcus aureus hemolyticus (pure culture).	29	5 week	No post-nasal discharge. One small furuncle since treatment was concluded.
17	F	41	Stenographer	Frequent colds. Postnasal discharge. Arthritis.	Non-suppurative chronic ethmoiditis and sphenoiditis bilateral.	Tonsillectomy.	Staphylococcus aureus hemolyticus. Type Alpha hemolytic Streptococci.	34	7 week	No colds. Decreased discharge. Decreased arthritic pains.
18	F	30	Housewife	Constant colds and post-nasal discharge.	Antritis chronic bilateral. Ethmoiditis chronic bilateral.	Tonsillectomy.	Staphylococcus aureus hemolyticus Gram neg. microaerophilic rods.	36	4 week	No colds, although constantly exposed. Better health than in years.
19	F	55	Nurse	Continuous antral and post-nasal discharge. Neuralgic pains of face.	Pan-sinusitis bilateral.	Caldwell-Luc bilateral. Partial ethmoidectomy bilateral. Tonsillectomy.	Type Alpha and type Beta hemolytic Streptococci. Staphylococcus aureus. B. coli.	42	7 week	No anterior nasal discharge. Greatly reduced post-nasal discharge. Neuralgic pains improved but not cured.
20	M	50	Real estate broker	Chronic nasal discharge. Periodic headaches. General malaise.	Antritis chronic left. Ethmoiditis chronic left.	Naso-antral window left. Tonsillectomy.	Staphylococcus aureus hemolyticus.	24	2 week	No nasal discharge. No headaches. Better health than in years.
21	F	29	Nurse	Frequent and persistent colds. Post-nasal discharge. Arthritis.	Antritis and ethmoiditis chronic left.	Tonsillectomy.	Staphylococcus aureus hemolyticus. B. pyocyaneus.	40	5 week	No colds for 7 months. Very little post-nasal discharge. No arthritis.
22	F	59	Housewife	Post-nasal discharge. Neuralgic pains in face. Mild generalized arthritis.	Ethmoiditis low-grade chronic bilateral.	Tonsillectomy.	Staphylococcus aureus hemolyticus. Pneumococcus. Type Beta hemolytic Streptococci (light growth).	33	4 week	Decreased amount of discharge. Neuralgia less frequent and less intense. Arthritis greatly improved.
23	M	24	Salesman	Frequent colds. Constant post-nasal discharge.	Frontal sinusitis left. Ethmoiditis chronic left.	Middle turbinectomy left. Tonsillectomy.	Meningococci. Type Alpha hemolytic Streptococci.	30	3 week	No colds. Greatly decreased post-nasal discharge.
24	F	44	Maid	Post-nasal discharge. Nasopharyngeal soreness. Generalized arthritis.	Sphenoiditis chronic bilateral.	Tonsillectomy.	Staphylococcus aureus hemolyticus (many). Type Alpha hemolytic Streptococci (few).	32	6 week	No sore throat. Arthritis improved.
25	F	39	Housewife	Frequent severe headaches for 8 years. "Rheumatism" for past year.	Ethmoiditis chronic bilateral. Sphenoiditis chronic bilateral.	Middle turbinectomy bilateral. Partial ethmoidectomy bilateral. 3 operations.	Type Alpha hemolytic Streptococci. Staphylococcus aureus non-hemolyticus and hemolyticus.	38	3 week	Occasional mild headache. "Rheumatism" practically gone.
26	F	56	Housewife	Headaches. Periodic nasal symptoms. Constant post-nasal discharge.	Sphenoiditis chronic bilateral. Ethmoiditis chronic right.	Middle turbinectomy bilateral. Several ethmoid operations. Tonsillectomy.	B. pyocyaneus (heavy). B. coli (light). Staphylococcus aureus hemolyticus (light).	35	2 week	No headaches. Eyes much improved. Discharge decreased.
27	M	50	Retired	Frequent colds. Frequent frontal headaches.	Ethmoiditis chronic left.		Streptococcus viridans.	30	5 week	No colds. No headaches.
28	F	47	Housewife	Nasal obstruction. Severe frontal pain. Frequent colds.	Ethmoiditis chronic bilateral. Sphenoiditis chronic left.	Tonsillectomy. Submucous resection. Middle turbinectomy bilateral.	Staphylococcus aureus hemolyticus. Type Alpha hemolytic Streptococci.	42	8 week	Nose clear except for hay fever. Frontal pain only with hay fever. No colds.
29	F	42	Teacher	Periodic headaches. Much post-nasal discharge.	Ethmoiditis chronic bilateral.	Tonsillectomy. Submucous resection.	Staphylococcus aureus hemolyticus (heavy). Type Beta hemolytic Streptococci (heavy). Type Alpha hemolytic Streptococci (light).	32	4 week	Greatly decreased discharge. Headaches infrequent and mild.
30	M	32	Physician	Constant nasal obstruction. Frequent colds. Post-nasal discharge.	Ethmoiditis chronic bilateral.	Tonsillectomy.	Staphylococcus aureus hemolyticus and non-hemolyticus.	38	2 week	Nose rarely obstructed. Few mild colds. Reduced amount of discharge.
31	M	34	Physician	Chronic post-nasal discharge. Frequent sore throat. Constant fatigue.	Low-grade chronic Ethmoiditis bilateral.	Tonsillectomy.	Type Alpha hemolytic Streptococci.	32	3 week	No sore throat. Much improvement in general health.

Case	Sex	Age	Occupation	Complaint	Diagnosis	Previous Surgery	Organisms	No. of Treatments	Improvement First Noted	Condition When Last Seen
32	F	43	Nurse	Post-nasal discharge. Occasional headaches. Nasal obstruction.	Antritis chronic bilateral. Ethmoiditis chronic bilateral.	Tonsillectomy. Naso-antral windows bilateral.	Pure growth Staphylococcus aureus hemolyticus.	34		No improvement.
33	F	38	Housewife	Extreme fatigue. Frequent colds. Post-nasal discharge. Frequent severe headaches. Generalized arthritis.	Ethmoiditis chronic bilateral.	Tonsillectomy.	Staphylococcus aureus hemolyticus. Type Alpha hemolytic Streptococci.	40	3 week	No colds. Discharge decreased. Headaches infrequent and mild. Arthritis much improved.
34	F	34	Saleswoman	Post-nasal discharge. Severe constant headaches. Much nasal crusting.	Antritis chronic bilateral. Ethmoiditis chronic bilateral. Sphenoiditis chronic bilateral.	Tonsillectomy. 14 intra-nasal operations including bilateral Caldwell-Luc.	1—B. pyocyaneus, B. coli, Staphylococcus aureus hemolyticus, type Alpha hemolytic Streptococci. 2—(4 months later) Staphylococcus aureus hemolyticus, Meningococcus.	1: 37 2: 33	3 week then influenza	No crusting. Moderate post-nasal discharge. Infrequent headaches.
35	F	38	Housewife	Frequent colds. Frequent severe headaches. Intermittent arthritis.	Ethmoiditis and Sphenoiditis chronic bilateral.	Tonsillectomy.	Staphylococcus aureus hemolyticus and non-hemolyticus. Pneumococcus. Type Alpha hemolytic Streptococci.	44	4 week	Occasional moderate headaches. No colds. Arthritis unchanged.
36	M	53	Engineer	Nasal obstruction. Continuous colds. Profuse post-nasal discharge.	Nasal polyposis bilateral. Ethmoiditis chronic bilateral. Antritis chronic right.	Tonsillectomy. 3 polypectomies.	Type Gamma Streptococcus (heavy). Staphylococcus aureus (light).	32	4 week	Nose clear of polyps. No colds. Post-nasal discharge decreased.
37	F	26	Stenographer	Headaches. Frequent colds. Post-nasal discharge.	Bilateral pansinusitis.		Pure culture Staphylococcus aureus hemolyticus.	34	8 week	No headaches. Occasional slight colds. Slight post-nasal discharge.
38	M	16	Student	Continuous head cold.	Ethmoiditis chronic right.	Tonsillectomy. Bilateral simple antrotomy.	Staphylococcus aureus hemolyticus.	38	3 week	No colds since 3rd week of treatment.
39	F	16	Student	Constant colds. Nasal obstruction.	Sphenoiditis chronic bilateral. Ethmoiditis chronic left.	Tonsillectomy.	Staphylococcus aureus hemolyticus. Type Alpha hemolytic Streptococci. Type Gamma Streptococci.	39	6 week	No colds. Nose clear.
40	F	42	Housewife	Frequent sore throat.	Ethmoiditis chronic left. Sphenoiditis chronic right.	Tonsillectomy.	Staphylococcus aureus hemolyticus. 2—Type Alpha and type Alpha prime hemolytic Streptococci.	33	4 week	Good until contracted influenza when symptoms returned. Second culture taken.
41	M	12	Student	Arthritis. Constant colds.	Ethmoiditis chronic bilateral.	Tonsillectomy. Bilateral simple antrotomy.	Staphylococcus aureus hemolyticus.	37	5 week	No colds since treatment.
42	M	36	Physician	Frequent colds. Post-nasal dropping. Headaches. Nasal obstruction.	Ethmoiditis chronic bilateral. Sphenoiditis chronic left.	Tonsillectomy.	Streptococcus viridans. Staphylococcus aureus hemolyticus.	42	4 week	No colds. Nose clear. Slight post-nasal discharge. No headaches.
43	F	52	Clerk	Constant post-nasal dropping. Frequent colds. Arthritis.	Sphenoiditis chronic bilateral. Antritis chronic right.	Naso-antral windows.	B. pyocyaneus. Type Alpha prime hemolytic Streptococci.	35	8 week	Slight post-nasal dropping. No colds. Arthritis slightly improved.
44	M	46	Executive	Nasal obstruction. Post-nasal dropping. Polyps—nasal.	Right frontal Ethmoiditis and maxillary infection. Left maxillary infection.	Submucous resection. Polypectomy.	Staphylococcus aureus Type Alpha and Type Alpha prime hemolytic Streptococci.	33	3 week	Nose clear. No post-nasal dropping.
45	F	60	Domestic	Post-nasal dropping. Arthritis. Occasional sore throat.	Right ethmoiditis. Left sphenoiditis.	Tonsillectomy.	Staphylococcus aureus hemolyticus.	38	6 week	Slight post-nasal dropping. Arthritis greatly improved.

It is interesting to note that in the thirteen patients complaining of arthritis, there were five cultures which showed staphylococcus alone, and eight which showed both staphylococcus and streptococcus. This would seem to be another proof that streptococcus is not always the causative organism in arthritis. It should also be noted that ten of these thirteen cases were cured or improved by this treatment alone, in spite of the contention which still persists in some quarters that sinuses cannot act as foci of infection.

In the series here reported there were twenty-six patients had had no previous nasal surgery, and nineteen cases which had had from one to fourteen nasal and sinus operations. The percentage of good results from the use of endo-antigens has been consistently high in both types of cases.

That patience is necessary in the use of this method is shown by the fact that in some cases there was no sign of improvement until the seventh to tenth week. However, improvement was usually seen by the fourth week of treatment.

End-results of treatment in this series have been tabulated under four headings, as follows:

No improvement	2 cases—5%
Symptoms improved; discharge still present	13 cases—29%
Symptoms improved; discharge greatly decreased or absent	13 cases—29%
Complete absence of symptoms and discharge	17 cases—37%

From the above it will be seen that in this series there were 66 per cent of good to excellent results, while 95 per cent of the end-results may be classified as satisfactory.

CONCLUSIONS

Based upon this series, the following conclusions are presented:

1. Autogenous endoantigens, prepared according to the method of Dr. Albert P. Krueger, were employed by topical and general administration in the treatment of chronic and subacute sinus infections.

2. This procedure apparently results in an increased ability of the host's tissues to handle the infecting agent. The tissue response is largely phagocytic in nature.

3. It is not possible to employ a fixed scale of dosage; individual variations in tolerance are considerable, although untoward reactions were not observed in this series.

4. Analysis of end-results in forty-five cases treated by this method shows satisfactory improvement in 95 per cent, and marked improvement or cure in 66 per cent.

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DISCUSSION

ALBERT P. KRUEGER, M. D. (University of California, Berkeley).—Doctor Kracaw's observations represent a very painstaking attempt to apply clinically, and to evaluate therapeutically, a simple postulate of immunochemistry, namely, that a given tissue may be immunized against a particular live microorganism by bringing into contact with it dead cells of the same species; and that this local immunity may be reinforced by intradermal and subcutaneous injection of the bacterial antigen.

There is nothing new either in this concept of immunotherapy or in its application to the mucoperiosteum of the paranasal sinuses and the mucosa of the nasal fossae. The present study does represent a departure from previous attempts along these lines, however, in two essential points: first, the avoidance of metabolites and protein-split products in the immunizing materials, thereby preventing nonspecific and purely irritative tissue responses; secondly, protection of the cells' antigenic proteins against denaturation, an easily induced reaction which profoundly affects protein structure and changes its immunologic properties.

On purely theoretical grounds, then, an antigen prepared according to this technique should more nearly resemble the natural antigenic complexes of the living cell than would a heat-killed vaccine. It should produce more specific tissue responses, and less nonspecific reactions; and should constitute an efficient desensitizing or immunizing agent. Doctor Kracaw's data suggest that this is the case. That the treatment frequently involves desensitization phenomena, as well as classical immunization, the writer is prone to believe, particularly when there is taken into consideration the long-continued association between bacterium and tissue.

The graveyard of clinical medicine is filled with the skeletons of many formidable immunologic schemes, and I realize that practical test alone will serve to clearly define the limitations of the present general theory. The gap between laboratory prediction and clinical application seems to have been partially bridged by Doctor Kracaw's work. It would be a serious oversight to omit from this discussion a grateful acknowledgment of the carefully thought-out technical contributions made by Doctor Kracaw in adapting the procedure to clinical usage.

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J. MACKENZIE BROWN, M. D. (1136 West Sixth Street, Los Angeles).—Any therapeutic measure capable of curing the high percentage of chronic sinusitis, as obtained by Doctor Kracaw, is worthy of the most serious consideration, particularly when these measures are nonsurgical; in fact, any procedure that will relieve this so prevalent ailment is worthy of study. In the past, we have had somewhat similar methods of treatment with very favorable results at first, but they have not stood the test of time. I think that any treatment that is not based on the etiology and pathology present is not sound; similarly, the treatment that does not treat the whole patient as well as the local lesion is fundamentally unsound. I fail to see just how any treatment other than surgical could cure a chronic

antrum due to an abscessed tooth. I believe the treatment of chronic sinusitis resolves itself into:

1. General care, *e. g.*, diet, exercise, endocrines and allergic studies, etc.
2. Building up the resistance by vaccine, antigens, etc.
3. The removal of foci of infection that have an effect on the individual locally or generally, *e. g.*, tonsils which may produce a general toxemia; and locally, acute infections of the upper respiratory tract; diseased teeth having a general toxemia and locally keeping up a chronic antrum, etc.
4. Proper drainage and ventilation of all sinuses, if necessary, by a thoroughly complete septum operation.
5. The removal of the local pathology, *e. g.*, doing a Caldwell-Luc on an antrum that fails to respond to the above and other measures.

We frequently find abscesses in and below the mucosa and osteitis that I do not think any treatment other than total removal of the membrane and diseased bone will cure. I find that many of my sinusitis patients will get well by treatments, but return with a new sinusitis with each acute rhinitis. Measures taken to prevent these attacks are of great benefit, and the longer one goes without an acute rhinitis the better is the chance for no return of the sinusitis. After having put the patient in the best local and general condition, then, if the antigen of Doctor Krueger will restore the chronic mucosa to its normal or near normal, I am for it. I hope that Doctor Kracaw will continue his work and give us a further report on this endo-antigen.

✱

MATHEW N. HOSMER, M.D. (384 Post Street, San Francisco).—I started using the vaccine and lysate, as prepared by Dr. A. P. Krueger, about a year and a half ago, in an effort to relieve those patients who did not respond to ordinary methods of treatment and those who, in addition to their sinus infections, also had arthritis. My series comprises about thirty cases to date. While rather small it shows results that are truly encouraging.

I think it advisable to use considerable care in the choice of suitable patients for this type of treatment, in order to eliminate those who would not respond. I have not advised vaccine treatment in any patient who had obvious anatomical defects in sinus drainage, or those suffering from general physical ailments, such as glandular dysfunction or allergic sensitivity. Those having such defects will, of course, show improvement when the defects are corrected.

The group that shows repeated sinus infections in spite of adequate sinus drainage is the one best suited for this sort of treatment. One may see an isolated infection in one ethmoidal labyrinth, or a generalized pansinusitis, or the type with which I have had splendid results, namely, the person with the boggy wet membranes showing no definite pus. The results in each of these groups have been good, but the improvement in the boggy membrane has been the most gratifying, as these are the ones that have shown no results with other methods of treatment. In these cases, after a few weeks of treatment the membranes show a decided improvement in tone and color, and there is a definite diminution in the amount of post-nasal discharge.

The group having definite ethmoidal and sphenoidal infections have shown improvement. I believe this is a step forward, as the results from ethmoidal surgery, both radical and intranasal, are often discouraging. I have not used the lysate in the antra, as I feel that the Caldwell-Luc operation has proved quite satisfactory in most cases. Here we are dealing with one large cavity, which is easily cleaned, instead of numerous smaller cells, as in the ethmoidal labyrinth. Doctor Kracaw may be referring to the antra, on which the intranasal window operation has been done; but even in these I believe that, if they do not clear within a reasonable length of time, the radical operation should be done.

Those cases having arthritis due to sinus infections have responded very well. The relief of pain and the return of function have been noticeable. The results have been considerably slower than in those with uncomplicated sinusitis.

The culture reports in my cases have been quite similar to those shown in Doctor Kracaw's cases. The frequency with which hemolytic *Staphylococcus aureus* has been found is surprising. Several of my cases have shown almost pure cultures of this organism.

I have instilled the lysate by the Proetz displacement technique, as has Doctor Kracaw, and wish to point out that one should use care in shrinking the nasal membranes thoroughly before attempting displacement, so that the solution may enter all of the sinuses. I have found that the lysate so used is far superior to antiseptics, such as the mercurials or phenol in oil.

MINOR BACK INJURIES*

By T. E. P. GOCHER, M. D.
San Francisco

DISCUSSION by Harlan Shoemaker, M.D., Los Angeles; George J. McChesney, M.D., San Francisco; James T. Watkins, M.D., San Francisco.

IN making a general survey of the subject of minor back injuries, we must consider injuries to the joints, muscles and ligaments, and minor fractures of the bones of the spine.

In certain instances the symptoms of injury may be delayed for varying periods, namely, from an hour to one or two days. Complications may also develop, the most common being an inflammation of the fibrous tissue, or fibrositis, in the region of the injured area. This fibrositis may spread and involve nerves, bursae and muscles, and may cause a synovitis if joint structures are involved. The disability period of these conditions will depend largely upon the correct diagnosis and the form of treatment given.

MUSCLE INJURIES

The usual muscle injuries are contusion, lacerations, strain and partial or complete rupture of muscle fibers. As aforementioned, complications may develop; and if a hemorrhage has occurred, frequently a fibrositis develops during the repair of the area, and the same will cause a prolonged disability. This disability may be prevented to a greater or less extent by appropriate and early treatment with physical therapy. In considering muscle injuries, the difference between "strained" and "overworked" muscles must be remembered. Strained muscles occur following severe muscular effort, exercise or direct trauma to the area. The maximum tenderness is over the damaged area, and disablement is immediate after the injury. If partial rupture of muscle fibers is present, then the onset may be delayed several hours. There will be pain when the normal elasticity of the muscle is exceeded. Active stretching will cause pain, and passive stretching is painless.

If the muscles are overworked, then a diffuse ache may be present; and if local the muscle may

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throb at intervals. The limb or area may feel weak and, later, pain may be complained of. Cold weather often aggravates the condition.

After a blow, strain or prolonged contraction, a muscle often becomes swollen and tender, and a sense of stiffness will prevail. Acute pain may be present when the muscle is put in action.

With the use of physical therapy, the writer has obtained the following results in curing cases of muscle injury referred to him.

	Treat- ments	Days to Cure
Rupture of fibers of the rector spinae.....	4	5
Strain of lumbar muscles.....	2	5
Latissimus dorsi muscle strain.....	2	2
Strain of rhomboid muscles.....	4	7
Multifidus muscle strain.....	5	6
Quadratus lumborum strain.....	4	4
Pyriiformis strain.....	2	6

The above statistics were obtained from, and are the average of the treatments of a number of muscle strains.

If complications should develop with these conditions, the time for curing them often is prolonged two or three times.

Treatment in these conditions should consist of a bake from fifteen to twenty minutes at such a distance that the heat feels "just warm." The bake should not be covered, to obtain the best results. Then massage, at first mildly but increasing in force; exercise and electrical massage if possible. Long-wave, ultra-violet radiation from a mercury quartz ultra-violet lamp is of value in these cases.

INJURIES OF LIGAMENTS

Ligament injuries usually suffered are sprains, and a fascitis may develop at the point of insertion. Sprained ligaments are usually produced by overbending the spine in any direction or from a sudden severe strain. Severe pain is present at the receipt of the injury. The point of maximum tenderness is over the torn ligament. Stretching of the injured ligament is painful, and any movement, either active or passive, is painful. Normally, ligaments are elastic, but they lose their elasticity when they are inflamed. When overstrained, they cause a sharp and severe pain.

Sprain of the anterior spinal ligament is rare, and is caused by hyperextension of the trunk; and immediate, severe and deep pain is felt at the site of injury.

A sprain of the posterior spinal ligament is caused by a sudden forced flexion forward. The pain is immediate and severe at the site of injury. There is severe tenderness over the site of injury to palpation.

The sacro-iliac, or sacro-sciatic ligament may be sprained. They cause tenderness and often swelling over their course, and at their origin or insertion. Also pain and tenderness will result from stretching, or from the application of any tension to the area.

The iliolumbar ligament is frequently sprained. This injury causes a deep pain or soreness over the course of the ligament. Stretching will cause pain, whereas hyperextension of the spine will relieve the soreness or pain.

Many times poor posture will cause a gradual ligament sprain that at any time may develop into a "painful stage." This state is often erroneously believed to be the result of an accident, whereas it has developed in the logical progress of the condition. For example, if the "painful stage" should occur while a man is at work, often he makes the mistake of attributing the pain to an accident occurring in the course of his employment.

From the use of physical therapy the following disability periods were obtained in curing the following sprains of ligaments.

	Treat- ments	Days to Cure
Sprain of sacro-iliac ligaments.....	9	12
Sprain of lumbosacral ligament.....	6	9
Sprain of iliolumbar ligament.....	7	8
Sprain of anterior spinal ligament.....	18	26
Sprain of sacrosciatic ligament.....	8	14

In sensility, and if a fascitis or fibrositosis is present, then the disability period of the injury may be prolonged from three to six times the above periods.

In a study of 310 cases of back injury, the writer found the following percentages of sprain:

	Per Cent
Lumbosacral	23.2
Sacro-iliac	18.4
Iliolumbar ligament	11.9
Lateral lumbosacral	10.9

Among other injuries present were:

	Per Cent
Strain of quadratus lumborum	12.9
Strain of lumbar muscles.....	3.0
Strain of the rhomboid.....	7.1
Strain of multifidus muscle.....	5.4

In the above cases, the writer personally treated and diagnosed the cases.

Treatment of these conditions should consist of a moderate amount of penetrating heat, such as radiant heat; mild massage and firm, but not too tight, adhesive plaster support to the area. Posture may greatly affect these conditions, so that care should be taken to rectify any faulty position. The patient should be shown, in a manner that he can understand, the best way to correct such faulty posture.

JOINT INJURIES

There are numerous joints throughout the spinal column, and any one of these may be injured. The condition may be a simple ligament sprain, or a synovitis on an arthritic joint. In some joints, if a synovitis should develop, the disability period will be greatly prolonged.

In a sprained joint the onset of pain is usually immediate; however, it may be delayed several hours if a synovitis is developing. At times there is a sensation best described as of "something giving way." The pain is often very severe. At first the pain and tenderness is strictly limited to the site of the joint affected, but later this tender area may enlarge and referred pain result. If the pain is deep-seated, it may follow the course of a nerve. Swelling occurs at once or very shortly after the injury. The pain or soreness is usually unilateral, and any movement of the joint intensifies it.

The common diagnoses of minor back injuries are sacro-iliac sprain, lumbosacral sprain, or lumbar strain. The diagnosis of sprains and synovitis

of the lateral lumbar joints, and especially the lateral lumbosacral joints, is rarely made. This last joint is frequently sprained, and is the cause of many faulty diagnosed back injuries, and the treatment is not usually of the best.

A sacro-iliac synovitis is a very serious condition, especially if the condition is bilateral. It is one of the most difficult conditions to treat, and unless treated correctly the disability period may run into many months. In studying a series of sacro-iliac joint area injuries, the writer obtained the following statistics:

UNILATERAL SACRO-ILIAC TRAUMA

Area	Number of Cases	Per Cent
The joint itself affected	9	16.9
The ligaments of area affected	44	83.1

In studying thirty cases that were diagnosed as a lesion of the sacro-iliac joint, the writer obtained the following:

Area	Number of Cases	Per Cent
The joint was affected	4	13.3
The ligaments were affected	20	66.6
The muscles over the area were affected..	6	20.1

In studying another series of cases diagnosed as sacro-iliac injuries, the writer found that in only 8.6 per cent of these cases was the sacro-iliac area actually injured.

The difference between a joint injury and a ligament injury is difficult to diagnose at times. It is not often that a joint injury occurs without a ligamentous lesion; but a ligamentous lesion may occur and no joint lesion be present. At times a spreading fibrositis may occur; and if this affects a joint, then a synovitis may develop from the inflammation.

A joint lesion of an arthritic joint is very important; for unless good treatment is instituted at once, the disability period may be very long. In some cases involving osteo-arthritis of the back, it is impossible to fully cure and remove all pain. The following is a table of what can be done in treating the spinal joints for injury until cured and free from pain. These statistics are from the writer's own experience.

	Treatments	Days to Cure
Sprain of an osteo-arthritic lumbosacral joint	26	54
Sprain of osteo-arthritic spine, hips, and lumbosacral joint	79	186
Sprain on a lower dorsolumbosacral arthritic joint	35	75
Sprain of lateral lumbosacral joint, unilateral	5	6
Sacro-iliac synovitis, unilateral	23	31

Treatment of these joint conditions should consist of immobilization and rest, when required. Heat should be carefully applied, and great care be taken that a stimulating effect is not obtained. The tone of the areas surrounding should be kept up. Rest should be in a "position of natural ease," and care should be taken that any pressure applied is not too tight. Posture has a marked effect on spinal joints, and this fact should be carefully studied and corrected when necessary.

INJURIES TO BONE STRUCTURES

Minor injuries to the bones of the spine are usually in two forms, either a contusion or a frac-

ture of the transverse or spinous processes. An aggravation of an existing condition, as an arthritis, may occur. A contusion may cause severe pain, and is most common over the coccyx or sacrum. Penetrating heat and mild massage is called for in this instance. At times a periosteal reaction may occur, and frequently this is called a fracture if seen late. A mild massage, using an indirect diathermy at the same time, is of great value in these cases.

A fracture of either a transverse or a spinous process may occur. In the case of the transverse process, the cause may be either direct trauma or muscular contraction. The writer has found the latter to be present in 41.8 per cent of a series of cases of fracture of the transverse processes. The disability periods of these fractures may be from six to twenty-eight weeks; or in an osteo-arthritic case, pain may be a permanent feature. An ordinary simple case should be well in six to eight weeks. There are a certain number of these cases that are never diagnosed, and the diagnosis given will be "sprained back." The taking of x-rays of the injured area will usually "clinch" the diagnosis. These cases usually react very well to treatment, and no permanent disability should remain. Treatment generally consists of hyperextension at first, and is followed by heat, massage, and exercise.

PAIN

Pain is one of the chief symptoms of a back injury; and if the pain is of a bilateral nature and follows the course of a nerve, then care must be taken that there is no compression fracture present. If present this pain usually develops suddenly and may be severe in nature.

A muscle pain is usually a constant ache. The pain of connective tissue is of a dull aching nature, except when at absolute rest. The pain of nerves is shooting, tingling, sharp and boring. A bone pain is boring and is worse at night, and at any time when there is a congestion present at the area. There are five instances when pain may be delayed following trauma, and they are: (1) in a joint lesion; (2) when a synovitis is developing; (3) when a myositis is present; (4) if a partial muscle rupture is present; and (5) if a bursitis is developing. Pain may also be delayed following injury to a cartilage.

If tenderness is present to an area where pain is complained of, then pathology is usually present at that area; if no tenderness is present, then suspect that the pain is referred.

MECHANICS OF THE INJURY

It is important always to consider the mechanics of the injury, and if the claimed injury could have been caused by the alleged described accident. Other points to take into consideration are:

1. Did any unforeseen event occur, as slipping, stumbling, or falling?
2. Was there a body-twist at the time of accident?
3. When did symptoms first appear, and in what sequence?

It is known that a very severe injury may occur from a minor accident. In these cases it must be ascertained whether there is any constitutional disease present, or any condition that would tend to lessen the normal resistance that nature has given to that area.

It must be remembered that there are certain diseases that go into a "painful stage" very suddenly, and very often these cases are called "accidents" by the recipient, especially if he should be working at that time. An acute fibrositis, of either infectious or metabolic cause, is one of the most common diseases to suddenly develop a "painful stage." Others are influenza, smallpox, kidney disease, lumbago, and reflex conditions from the abdomen and pelvis.

MALINGERING

During the writer's experience, malingering has not been found to be very common. However, the tendency to exaggerate the symptoms complained of is very common. Personal experience, the knowledge of anatomy, and psychology, will assist a great deal in these cases. If there is no hip injury, and the patient with a back sprain assumes the "diving posture" in bending forward, then suspect a fraud or an exaggeration of symptoms. The same should be suspected if severe pain is complained of and there is no muscle spasm, although mild pain may be present.

Before accusing an injured person of being a malingerer, make certain that there is nothing the matter with him. Reconsider the case from all angles, and if in doubt have a consultation. Make sure that you can prove your charges, and do not accuse an injured person of malingering because you are unable to correctly diagnose the case.

Several important points to remember in considering the subject of malingering are:

1. In real lumbago, there is no maximum tender area.
2. If the spinal area alone is injured, it is possible to bend forward at the hips.
3. If the spine bends below the area of injury, then suspect a fraud, unless there is only soft tissue injury.
4. If claim is unilateral sciatica, and there is no tenderness of the lumbar third, fourth, fifth, or sacral first, then suspect a fraud.
5. If pain is bilateral and an accident is claimed, then consider the possibility of fraud and the mechanics of the injury.
6. If the painful area is tender to pressure, then pathology is present; if not tender, then the pain is referred.
7. Consider the anatomy of the area, and remember that in certain instances a severe injury may result from apparently minor trauma.

TABLES INDICATING CAUSES OF BACK PAINS

The following tables were obtained as a result of studies of the writer throughout a number of years on the subject of back pains.

The following table was worked out from a study of 116 consecutive cases of back pains reported to the writer in a construction camp on one of the major developments in this State:

Condition	Number	Per Cent
Chronic prostatitis	7	6.2
Acute prostatitis	3	2.5
Loaded or irritation of rectum	2	1.7
Acute cystitis	3	2.5
Kidney disease	4	3.4
Strains	62	53.4
Blows, direct	11	9.5
Fractures	24	20.6
	116	99.8

In the above I found:

	Per Cent
Disease	16.3
Injury	83.7
Muscles affected	27 27.7
Ligaments affected	9 9.2
Joints affected	37 38.1
Fractures affected	24 25.0
	97 100.0

In a study of 310 back injuries, I found the following:

Condition	Number	Per Cent
Lumbosacral sprain	72	23.2
Sacro-iliac sprain	57	18.4
Quadratus lumborum strain	40	12.9
Iliolumbar ligament sprain	37	11.9
Lateral lumbosacral joint sprain	34	10.9
Lumbar muscle strain	9	3.0
Latissimus dorsi strain	10	3.2
Multifidus muscle strain	17	5.4
Rhomboid muscle strain	22	7.1
Sacrococcygeal joint sprain	2	0.8
Acromioclavicular joint sprain	10	3.2
	310	100.0

In studying the causes of prolonged treatment and aggravation of symptoms in one hundred cases, I found the following causes, and often more than one cause to a case. Removal or treatment of the believed source of infection gave relief in each case.

Condition	Number	Per Cent
Posture	25	25
Pelvic disease	7	7
Hip arthritis	3	3
Infection	55	55
(a) Teeth	12 cases	21.8 per cent
(b) Tonsil	4 cases	7.2 per cent
(c) Prostate	6 cases	10.9 per cent
(d) Alimentary	33 cases	50.1 per cent
Arthritis	35	35
(a) Infections	10 cases	28.6 per cent
(b) Metabolic or toxic	25 cases	71.4 per cent

In studying 279 industrial cases, I found the following complication table:

Area	Total Cases	Complications			
		Yes	Per Cent	No	Per Cent
Lumbosacral	72	52	72.2	20	27.8
Quadratus lumborum	40	17	42.5	23	57.5
Sacro-iliac	57	37	64.9	20	35.1
Ligament iliolumbar	37	21	56.7	16	43.3
Lateral lumbosacral joint	34	15	44.1	19	55.9
Multifidus muscle strain	17	7	41.1	10	58.9
Rhomboid muscle strain	22	10	45.4	12	54.6
Total and average	279	159	53.8	120	46.2

From studying the above, I found that in 54 per cent of industrial cases, complications develop and have to be treated.

IN CONCLUSION

When you are examining a minor back injury, remember the possibilities and do not "jump at the diagnosis." Try to give, as near as possible, the correct diagnosis in anatomical terms, for only then can a treatment be worked out that will really lessen the disability period, and results be obtained.

333 Pine Street.

DISCUSSION

HARLAN SHOEMAKER, M. D. (1014 Wilshire Medical Building, Los Angeles).—Slight, moderate, and severe muscle strains of the back are conditions overlooked and seldom properly treated when diagnosed. In the first two of these diagnoses in back strains, Doctor Gocher has very carefully drawn our attention to the possibilities of lack of care, oversight in diagnosis, and absolute abandonment of the individual as far as treatment is concerned.

It needs but little imagination to find the foundation for a cult in the neglected patient with a painful back. Until recent years, 96 per cent of all back injuries and diseases were overlooked. The author is to be complimented for again drawing our attention to these conditions, and outlining an efficacious method of treatment.

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GEORGE J. MCCHESENEY, M. D. (450 Sutter Street, San Francisco).—This paper is to be highly commended in that it goes far in regulating or systematizing the large field of complaints designated as due to minor back injuries. The chief value of this study to me is the effort made to diagnose the actual anatomical tissue involved in the injury. If this can be done by a careful study of the mechanics of the injury as well as the ensuing symptoms, the prognosis and treatment becomes more accurate and beneficial. Only too often we see a diagnosis made of "Low Back Strain," with prognosis of recovery by barking treatment in one or two weeks, but the patient drifting along into months or years of disability. Doctor Gocher's tables and classifications should, if followed, prevent such mistakes. His last two tables, I feel, are especially important, as they lead to the conclusion that, in 54 per cent of industrial cases, complications develop and have to be treated.

Finally, I note with interest that in no place is the term "sacro-iliac slip" used. Instead, attention is called to the relative frequency of lesions of the sacro-iliac ligaments and infrequency of involvement of the joint itself.

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JAMES T. WATKINS,* M. D., (909 Hyde Street, San Francisco).—To the profession at large, and especially to industrial surgeons, the importance of papers like this cannot be overemphasized.

The treatment of the effects of disease and of injuries by physical therapeutics should have as recognized a place in medicine as drug therapy. Until such treatment is systematically taught in the schools, and taught by men whose knowledge is based upon scientific understanding of just what this or that modality will or will not do—the character and amount and duration of its application—our treatment is bound to be empiric and more or less haphazard.

A careful study of Doctor Gocher's paper is well worth while. We may not accept always his nomenclature nor his pathologic groupings, but that is a matter of no great moment.

What he has attempted to point out, with no little success, is the importance of determining early: (1) just what structures are injured; and (2) when that is determined a consistent, reasonable means of successfully treating the condition by physical means. And I would lay particular stress upon the word *early*. If the differential diagnosis is not made until effusions have had time to organize, until through repetition of minor injuries, or through the irritation of recurrent sprains or stretchings, the condition has become chronic: that is, until actual pathologic changes had occurred in this or that tissue, the problem of bringing about a return to normal had been indefinitely protracted, and not infrequently made impossible of solution. Viewing the matter on its sociologic side, the injured has by just so much ceased to be an asset to society and the aggregate untold millions of dollars are made an added impost upon industry.

Therefore, I repeat, the subject is one of first importance.

* Dr. James T. Watkins died on February 18, 1934.

ANORECTAL FISTULAE—ADVANCES IN THE TREATMENT*

By M. S. WOOLF, M. D.

San Francisco

DISCUSSION by William H. Kiger, M. D., Los Angeles; Kirk H. Prindle, M. D., San Mateo; David N. Yaker, M. D., Los Angeles.

THE following remarks concern the origin and management of anorectal fistulae of pyogenic origin, and the steps necessary to preserve the function of the anal sphincter.

Apart from a few blood-borne infections which are deposited near the rectum, the cause of fistula is due to damage to the terminal inch and a half of the intestinal canal, usually brought about by the evacuation of hard constipated feces or to a foreign body tearing down in this locality certain structures such as anal valves, crypts, polyps and external hemorrhoids, and usually accompanied by a resisting sphincter. These structures are in or bound the anal canal, but a foreign body or injury may pierce the rectum higher up. There follows a lymphangitis or thrombophlebitis, which takes the course of anatomical drainage. Then occurs an accumulation of infective material deep to the point of injury; that is, an abscess is formed. Such an abscess cannot drain of itself owing often to the minuteness of the orifice, which becomes edematous and swollen, to posture and to the movements of the sphincters; or if it does drain, it does so intermittently and incompletely.

E. W. Miles, in his discussion of fistulae, says (*Proceedings Royal Society*, September, 1932) an abscess precedes a fistula, and according to the structures in which the abscess has developed, so surgical treatment assumes a definite program.

CLASSIFICATION

Fistulae or abscesses may be grouped, according to Miles (Fig. 1), as follows: (1) subcutaneous; (2) submucous; (3) ischiorectal; (4) subsphincteric; (5) intermuscular; (6) pararectal.

I have purposely omitted mention of two forms of abscess which are usually described in this connection, namely, the pelvic and pelvirectal. The pelvic abscess, although it ruptures rarely into the rectum, heals on drainage being completed. The appendiceal abscess may evacuate itself by this route. The pelvirectal abscess is below the peritoneum but above the levator, and is formed from infection of adjacent structures, such as the prostate, broad ligaments, and usually drain of their own accord in the perineum, vagina or in the buttocks quite wide of the anal orifice. Such abscesses, if surgically opened, will always drain, of course, at the point of incision. Very rarely, indeed, do pelvirectal abscesses drain into the rectum (Miles says that they never do), and then usually between the sphincters. If such be the case

* From the department of surgery, University of California Hospital.

* Read before the General Surgery Section of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

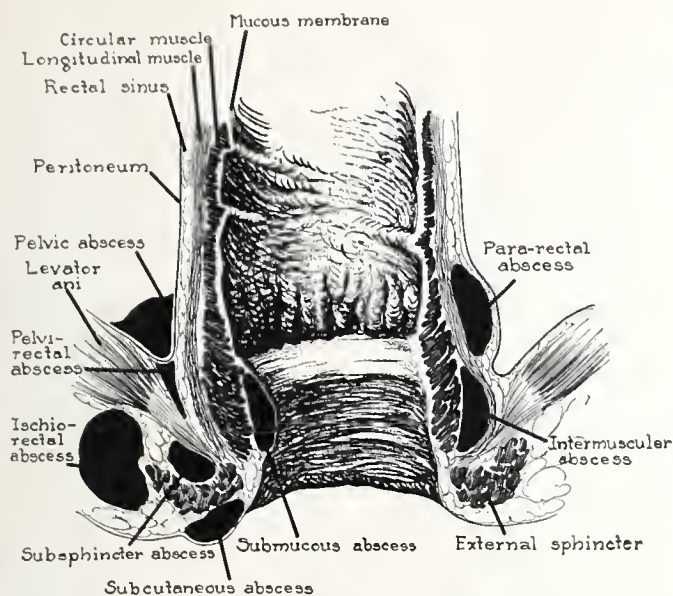


Fig. 1.—Abscess formation in the anal rectal region.

the abscess should be dealt with as an ischio-rectal involvement, since almost its entire bulk is at this time in the ischio-rectal fossa.

TREATMENT

The treatment of an abscess is drainage, which must be either from within the bowel or from without. External drainage is in the majority of cases the proper course, since it is adequate and the abscess, even though it does not "point," is accessible. There are only a few collections of pus which should be dealt with from within the bowel. These are the submucous and intermuscular. To prevent premature healing, the flaps produced by external incisions should be removed with their subjacent fat. The abscess having been dealt with, a fistulous tract into the bowel normally remains, which should not be dealt with at the same time as the abscess unless it is superficial or short.

Often there are bilateral abscesses with a communication across the mid-line, either anteriorly or posteriorly. Both abscesses should be evacuated simultaneously. After the drainage has subsided there are then two external openings and a communication between them; or, if the second abscess has ruptured into the rectum, there are two external openings and two internal. Again, one or other of the abscesses, or both, may have ruptured both into the rectum and through other openings on the surface, when we have the multiple external fistula with one or two openings inside the bowel.

The accompanying diagram represents a fistula which had originally eight external openings and two internal, one on each side. After two operations, one internal and one external opening remained, which are indicated in Figure 2.

Later, occasion will be taken to mention the principle on which a cure will have been determined.

Simple Fistulae.—The easiest fistula to heal is the simple subcutaneous or submucous tract,

whether this be blind or complete. A director is inserted into the one opening to its extremity, and through the second opening if such be present. The tissues are incised superficial to the director, so that the tract is laid open in gutter fashion. The submucous tract may be better laid open by a braided silk ligature on a ligature carrier inserted along the tract through the higher opening, but piercing the mucous membrane at the upper end of the tract should it be blind. The ligature is then tied so tight as to necrose the roof of the tract, which will then be laid open when the ligature is discharged. Such a plan avoids hemorrhage from the easily injured oblique branches of the hemorrhoidal vessels. Almost any of the deeper fistulae may have submucous accessory tracts, which must be looked for and treated. An unexpected and continued discharge of pus from the rectum, after proper treatment for a fistulous tract, may be due to leaving a submucous tract unopened. A subcutaneous fistula is superficial to the sphincter muscles and is also cured by direct incision over a director. Wherever there appears a collapse of skin and subcutaneous tissue into the opened tract, the margins should be removed to prevent recurrent bridging and re-formation of the fistula.

Intermuscular Fistulae.—The intermuscular fistula, which is usually blind and short, lies between the circular and longitudinal muscles of the rectum and anus. Such a one is dealt with in the same fashion as the submucous tract; but, of course, there will be more tissue superficial to it. Such a fistula lies usually between the internal sphincter and the longitudinal muscular coat, so that the internal sphincter is cut in the treatment.

Other Fistulae.—Remaining fistulae, except of the pararectal type, will have their tracts coursing



Fig. 2.—Showing late stage of healing of complicated anal rectal fistula.

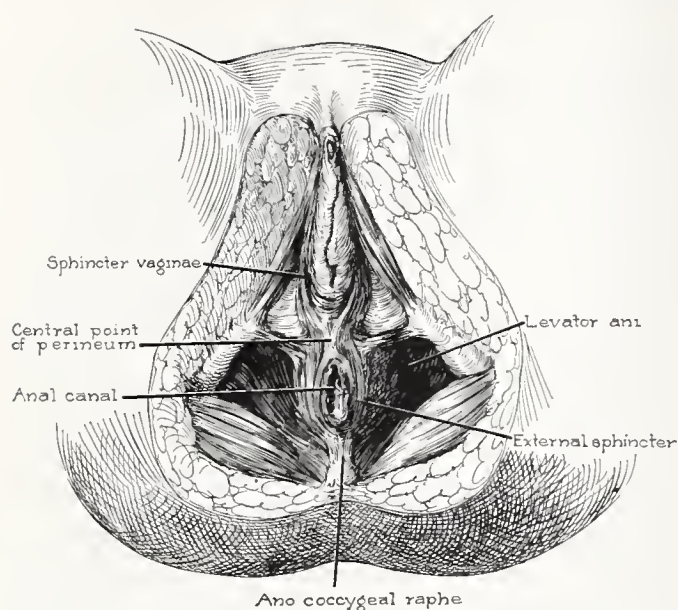


Fig. 3.—Attachments of the external sphincter ani muscle.

from the upper part of the anal canal into the tissues through the interval between the internal and external sphincter muscles. The commonest of these is the ischiorectal fistula, which is almost always complete. The external opening overlies the ischiorectal fossa. Miles's subsphincteric fistula is similar, the external opening being adjacent to the sphincter in front or behind; but its tract is similarly between the two sphincter muscles. The tract of both must be laid open by inserting a probe or director from one opening to the other, the tissues superficial being cut through, which will involve cutting the sphincter. Sacrificing the muscle may be done with certain reservations which apply always to severing this muscle if we hope to retain its function when healing is complete.

The external sphincter ani muscle (Fig. 3) has its attachments like any other muscle. It decussates behind and is attached together with the strong anococcygeal raphe to the coccyx. In front it also decussates, and it is firmly attached to the central point of the perineum and to the fibers of the bulbocavernosus muscle in the male and the sphincter vaginae in the female. Even in the presence of a fairly wide and deep wound behind or in front the sphincter may be severed, and yet its ends will not spread so far as to prevent a good end-to-end approximation on healing. Therefore, there is no particular difficulty incurred in severing the muscle which happens to be superficial to a tract leading from the external opening to the internal opening of any fistula which takes this course. In other words, this may be done with a fair degree of impunity in front and behind. The matter is entirely otherwise if the internal opening is lateral. Here the muscle is supported by no fibrous attachments. Should it then be cut in connection with a deep side wound, which has been made for the purpose of exposing the tract and its offshoots, the ends of the muscle would retract to the extent of the wound. In healing, the mucous membrane would bulge into this wound and a pear-shaped anal orifice result, which is

so often seen in incontinent ani. The ends of the sphincter remain spread and the damage is complete.

Such a result may be circumvented by not opening at this time that part of the fistulous tract which runs into the rectum between the sphincter muscles. All other infected channels with their branches must be laid open until one approaches the bowel. From this point a non-absorbable ligature is passed into the internal opening and tied loosely, the purpose being to find the tract easily later. When healing has so far advanced as to remain only incomplete in that short channel in which the ligature lies around the muscle, this tract may then be cut through, when the ligature will be freed. This involves cutting the muscle, the ends of which can spread only a few millimeters.

It is not wise to cut the muscle more than once at one time, so that if there are two internal openings carrying the fistulous tracts beneath the muscle, the muscle should be appropriately cut into the one internal opening; and not until this has firmly healed for several weeks should the second be dealt with similarly.

REPORT OF CASE

I have already mentioned a patient with multiple fistulae under my care at present. Nine years ago he had a right-sided ischiorectal abscess. He neglected to have it radically treated. It was merely lanced. Subsequently, over years, there formed offshoots, so that an anterior horseshoe fistula resulted with four external openings on each side and two lateral inside the canal, one on each side. These were deep to the external sphincter muscle. The treatment consisted of making a horseshoe-shaped incision anterior to the anal canal in such a way as to connect all external openings and to open up any blind pockets from these. An exceedingly large wound was produced, both ends being at the border of the sphincter. From the ends of this incision, which joined the tracts into the rectum beneath the muscle on either side, a ligature was inserted and tied loosely on the outside. The whole wound healed except for an opening on either side through which were the two ligatures. On one of these the muscle was then cut through and now this has healed. There remains but the right original tract, now quite short, into the rectum, which will be cut through in a little while.

PARARECTAL ABSCESS

The pararectal abscess produces the most severe constitutional disturbance of all infections preceding anorectal fistulae, and the resultant tract is the most difficult of treatment. The abscess is caused by perforation of the bowel by a foreign body such as ingested bones, pins, needles, splinters of wood, etc.; or, it may be due to septic thrombophlebitis of unknown cause originating in the rectal wall. The pus accumulates in the rectal sinus between the longitudinal rectal muscle and the investing tube of fascia called fascia propria. The abscess is situated posteriorly where the lymphatics and chains of glands follow their course up to the pelvic mesocolon. This space does not exist at the sides and in front of the rectum, since on these aspects the fascia is attached firmly to the longitudinal muscle. Therefore, on account of the depth of the inflammation from the anus (since it is

above the levator ani muscle where the sinus commences), and because of it being deep laterally to the rectal wall and, finally, on account of the glandular involvement, the symptoms are severe. The original internal opening, as we have said, is high. If left, the abscess tends to rupture through the levator into the ischiorectal fossa on one or both sides, or occasionally between the sphincter muscles. If seen early, the diagnosis is confirmed by digital examination when a deep sensitive bulging mass is felt near the examining finger. At this time it should be opened by inserting a knife parallel to the wall of the bowel from the buttocks and a large opening made by relieving incisions. The levator is opened in the direction of its fibers, or, at most, short transverse cuts made in this muscle.

Permanent loss of function will result if, in addition, the insertion of the levator ani is cut widely at the same time as the internal and external sphincters. Thus the treatment of a pararectal fistula, either formed by surgical treatment of an abscess or by natural drainage to and through the skin, consists in an exceedingly wide exposure of the tract and its offshoots with a limited opening of the levator ani muscle. The initial internal opening will heal spontaneously if this is done.

384 Post Street.

DISCUSSION

WILLIAM H. KIGER, M. D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Woolf has written a very good paper, but there are a few important points that should be stressed, and a few that he has not mentioned. I do not believe the profession in this country, or in England either, for that matter, has accepted Miles's theory of abscess formation. As Doctor Woolf has pointed out, the reason for so many failures in the cure of these cases is a lack of understanding on the part of the operator as to the origin of the disease.

It seems to be the impression of many that the abscess is the cause or beginning of the disease. This is probably due to the fact that, at that time, the symptoms are most marked, and the patient is more apt to seek surgical relief. Previous to that time he has been unaware of any trouble, or it has been so slight that he has paid but little attention to it. The development of an anal fistula may be divided into four stages—the abscess is the third stage. The first stage is the involvement of the crypt, or the traumatism that breaks the mucous membrane of the anal canal. The second stage is that of burrowing. The third stage is the abscess formation; the loose cellular tissue has little resistance, breaks down, and the abscess develops rapidly in size, and the symptoms become acute. It is at this stage that the patient usually consults the surgeon for relief. It is the tendency for the pus to burrow toward the skin, but it may rupture into the rectum, bladder, vagina, or the urethra. With the appearance of the secondary opening, regardless of its location, the fistula is complete. I think you can sum up the treatment of fistula in ano in one word—drainage. In your treatment, if you make your drainage sufficient, as Doctor Woolf has pointed out, you will cure your patient. There is one important consideration which has to do with muscular control, and the functions of the anus, following fistulectomy, which I think Doctor Woolf did not mention. The drains, or packing placed in the wound, should not be allowed to remain in position too long. If the wound is packed with gauze and allowed to remain a number of days, the walls of the wound become organized into a fibrous membrane, and a cavernous scar results. This interferes with the action of this muscle and the walls are

unable to produce closure of the anal outlet. There is another class of cases that we see many of in Southern California that Doctor Woolf has not mentioned, and that is fistula in the tuberculous patient. I think primary tuberculous infection around the rectum is very rare. In the older textbooks they tell us that the most of their cases were tuberculous in origin. This has been proved erroneous, and you will probably never find a tuberculous fistula except as a secondary infection to tuberculosis in some other part of the body. Your treatment of fistula in a patient that has an arrested process should be quite different from the ordinary case. Quite a large percentage of fistulae in this class of cases are infected with tuberculosis, and for this reason they should never be touched with anything but the cautery. With this method of operation, you do three important things: first, kill the infection; second, seal up the lymphatic against absorption; and third, do not have any loss of blood, which is quite important to the patient.

✱

KIRK H. PRINDLE, M. D. (23 Second Avenue, San Mateo).—I wish briefly to emphasize two points with which Dr. Wolf has dealt adequately, but which, in my estimation, will bear emphasis.

The first is the importance of avoiding trauma to the external sphincter muscle. When it is necessary to sever the muscle, Doctor Woolf has told us how to do it the best way; but it is about unnecessary trauma to this muscle that I wish to speak. It is the possible injury, due to the clamping of tissue for bleeders; the exploring of blind tracts and offshoots of the main tract; and the reaction from tight packing, often left too long, that results in damaged sphincter control. Overstretching of the anal sphincter about which there is chronic inflammatory tissue may not actually sever the muscle or muscles, but may cause serious embarrassment of function. I presume the essential pathology is a replacement of normal muscle by fibrous tissue or scar tissue, followed by impairment if not total loss of function of the muscle of the external sphincter. I have two cases which illustrate this point. At times both have trouble retaining gas, yet both are continent even when the stool is watery, and both have been operated upon and their fistulae cured. In each case, however, there is slight impairment of the sphincter, even though the external muscle was not severed. Examination in both cases reveals no excessive scar; they never soil themselves, nor is it necessary for them to wear rectal pads, but they complain of inability to control gas at times.

The second point, which I believe is overlooked by most surgeons, and omitted from textbooks, is the importance of the so-called relieving incisions. This term, used by Miles in his classical discussion of this subject, refers to the short incisions at right angles to the main line of the sinus tract. They are usually from one-half to one inch in length—their number depends upon the length of the main incision or incisions. They permit a proper relaxation of the wound, obviate, as a rule, the necessity of packing, and prevent annoying contracted scars in the vicinity of the anus.

✱

DAVID N. YAKER, M. D. (727 West Seventh Street, Los Angeles).—There are a few points which might be added in the treatment of anorectal fistula. Doctor Woolf mentions drainage, and the writer also wishes to stress this point: in operating on an abscess, in order to bring about perfect drainage, it is imperative that enough skin be removed so as to leave the external opening as large as the original abscess; in the treatment of an ischiorectal abscess which, if large, assumes the shape of a pyramid with the base resting on the external skin, the entire base should be removed to bring about this drainage.

Very little has been said by Doctor Woolf with regard to postoperative treatment, which is most impor-

tant in producing successful results. The packing should be left in the wound for not more than forty-eight to seventy-two hours; the wound should not be repacked, but must be kept clean by frequent bathing, and by the application of mild antiseptics; the wound must also be digitally explored every second or third day to avoid the so-called bridging, and to permit the even filling of the open spaces by granulation tissue, as well as to insure the healing of the wound from the bottom out.

Doctor Woolf is to be commended for his stand in the treatment of the acute abscess and the very extensive fistulae, involving the sphincters; it is far better to do a second operation than to incur any possibility of incontinence due to a severed sphincter muscle. Doctor Woolf has treated this subject in a masterful fashion and he is to be congratulated.

In the opinion of the writer, there is little difference, except in wording, between the theory brought out by Miles and that accepted by many American proctologists; to quote Miles: "The sequence of events, therefore, leading up to the establishment of an anorectal fistula is, in the majority of instances, as follows: (a) Appearance of an initial lesion; (b) septic lymphangitis or phlebitis, as the result of infection by microorganism; (c) suppuration eventuating in the formation of a localized abscess; (d) evacuation of the pus either into the bowel or through the skin, or in both situations, thus giving rise to (1) an incomplete, or (2) a complete fistula.

In the treatment of a fistula in a tuberculous patient, the most important factor to be borne in mind is the condition of the patient himself: if the patient is fighting a winning battle, or even holding his own (no afternoon rise in temperature, no night sweats, less cough, and other signs of improvement of the primary lesion) an operation, properly done, will result in cure; should the patient show signs of real activity of the pulmonary or other primary lesion, surgery is contraindicated. Successful cures have been reported by men using the cold knife as well as by those using cautery, but again it must be emphasized that the patient must be doing well before surgery should be attempted.

✻

DOCTOR WOOLF (Closing).—The discussion indicates that we are all in the main agreed on the treatment of anorectal fistulae. Doctor Kiger says that Miles's theory of abscess formation is not generally accepted. But Miles merely gives the stages of any abscess formation, which is, in this case, a trauma within the anal canal followed by invasion along lymph and blood vessels, pus subsequently collecting in the deeper tissues. Therefore, I cannot see but that he and Miles agree very perfectly in this matter, and abscess formation, though it could not start spontaneously, does precede all except some tuberculous fistulae.

The discussion of tuberculous fistulae was excluded from the scope of my paper, which rather had to do with procedures in nonspecific infections in which a routine practice was better illustrated. Yet, if I now mention the matter, it is because it has been brought up in the discussion. Unquestionably, my opinion is that of Doctor Yaker's who suggests that a consideration of tuberculosis of a part is not as important as tuberculosis of the whole patient, and that the use of the cautery is not necessarily obligatory for a cure. It is drainage of the infected areas which is of paramount importance in these patients who have elsewhere to deal with a possibly severe systemic disease.

Doctor Prindle renders me a service in emphasizing the need for care to prevent trauma to tissues intimately connected with the sphincter muscle. He has brought to light the fact that a sphincter may be damaged to a greater or less degree, even if it is not divulsed or cut, merely on account of rough treatment, or by the necrosis brought about by tight and prolonged packing.

INJURIES OF THE INTRA-ABDOMINAL HOLLOW VISCERA*

By EDMUND BUTLER, M. D.
San Francisco

DISCUSSION by Alanson Weeks, M. D., San Francisco; Fred R. Fairchild, M. D., Woodland; Joseph K. Swindt, M. D., Pomona.

"THE remarkable fact of the absence of all symptoms indicating a mortal injury for upward of two hours" was the observation of Polland in 1858. This observation is still a timely warning to be remembered in caring for the present-day industrial—or automobile injury; always recollecting, also, that the two hours may be lengthened, under conditions of shock and of alcoholism, to six or eight.

WHY SURGICAL INTERVENTION IS DELAYED

Surgical intervention is often delayed because of the following factors:

1. The injury does not seem serious to the patient, and the medical adviser is not called until hours, or even days, following the accident.
2. The frequent absence of visible evidence of injury of the anterior abdominal wall leads both the patient and the doctor to disregard the early mild symptoms of perforation.
3. The symptoms at the first examination are not remarkable, and frequent observations and examinations are not made.
4. Shock and alcoholism interfere with the usual reactions of the individual to a serious injury.

Battle, in the *Lancet* of 1919, made this pertinent statement: "It requires firmness to induce the patient to submit to an operation before peritonitis has made the need for operation obvious to the patient's friends." And Vance holds that "injury to the hollow viscera is often solitary, and complications develop insidiously. Death is from peritonitis rather than from hemorrhage."

FREQUENCY OF INJURIES

The frequency of the injuries of intra-abdominal viscera during the pre-automobile period was given by Makins in 1899 as follows: Kidney, thirty-nine plus per cent; intestine, twenty-three and five-tenths plus per cent; liver, sixteen and eight-tenths plus per cent; spleen, eleven plus per cent; bladder, five plus per cent, mesentery three plus per cent. Polland locates the injuries of the intestinal tract in one hundred and thirteen cases; duodenum six, jejunum forty-four, ileum thirty-eight, mesentery thirty-one, colon four. Fifty-eight per cent of the injuries were in the first three feet of the jejunum and the terminal three feet of the ileum. Bacon and Le Count, reviewing 383 autopsies, all automobile accidents, found the liver involved in over fifty per cent.

The hollow viscera may be injured in the following five ways:

1. Crushing of the viscus between the offending instrument and the bodies of the spine or other parts of the skeleton.

* Read before the Industrial Medicine and Surgery Section of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

2. A tangential force moving the bowel beyond the limits of mobility, resulting in tears of the mesentery, and tears in the intestine near the fixed regions.

3. Compression of fluid or gases in a single loop of intestine or in the bladder, which forces the wall to give way at the point of least resistance.

4. Spicule of the pelvic bones may rupture the bladder or the rectum.

5. Compressed air or water under pressure entering the anus, producing ruptures of the rectum or of the colon.

COMMENT

Some degree of shock is present in 80 per cent of these patients. When the shock is severe, hemorrhage is usually active. Shock is very slight, and often absent, in the solitary ruptures of the intestine or of the bladder. Vomiting is frequently not present and seldom contains blood. Vomiting is often delayed until septic peritonitis is well established. The pulse is quickened; when extremely rapid it indicates hemorrhage. The rapidly rising rate and the falling blood pressure indicate active hemorrhage. A fact that is not well known is, that if the bleeding is not from a large vessel the pulse slows first in an attempt to encourage coagulation and lessen the amount of blood loss. Temperature is usually normal or slightly subnormal immediately after the accident. Respiratory movements of the abdomen may not be restricted, and thoracic type of respiration is often delayed until septic peritonitis is established. In ruptures of the stomach and upper intestine the contents are very irritating; and immediately a scaphoid rigid abdomen and thoracic type respiration are found on examination. Distention is not present until late, when peritonitis has caused paralytic ileus. Peristalsis may not be changed at first, but usually is restricted.

Rigidity may be absent, and particularly is this true in lower bowel injury and rupture of the bladder. The contents are less irritating than those of the stomach and duodenum. Local tenderness is not remarkable earlier, and often demonstrable only by rectal examination and light percussion tenderness. Localized dullness, when present, indicates a confined hemorrhage in the mesentery, the omentum or the retroperitoneal spaces. Free blood in the peritoneal space is seldom demonstrable even when a considerable quantity is present.

The absence of liver dullness is not a reliable sign, but a tympanitic area above the liver in the mid-axillary line, and below lung resonance, is indicative of pneumoperitoneum. Rectal examination must never be omitted, early peritoneal tenderness may be elicited only by rectum. In retroperitoneal rupture of air or gas-containing viscera, emphysema of the pelvic cellular tissues may be palpated. In one of my patients a retroperitoneal rupture of the duodenum produced pelvic emphysema, easily palpated by rectum when the patient was first examined seventeen hours after the accident.

Pain is the most important symptom, and in some degree is present in all cases. Constant, although possibly very mild at first, it tends to

gradually increase. This pain sometimes is referred around the ribs and to the shoulders when the peritoneum of the diaphragm is irritated. Following retroperitoneal rupture of the duodenum, there is pain in the back and in the testicles. With the rupture of the bladder, there is pain across the lower abdomen, which is seldom severe and is often mistaken for the pain that is believed to be due to contusion of the abdominal wall.

Frequent, complete blood examination must be made. Slow, continuous bleeding soon shows as a reduction in the red count and in the percentage of hemoglobin. This change often shows in as short a time as one or two hours. Bleeding into any space, or in any tissue, causes a marked leukocytosis, often as much as thirty to sixty thousand.

Blood in the urine indicates genito-urinary injury. In rupture of the bladder, the amount of blood may not be great, as the blood and the urine may be escaping into the peritoneal space. The routine catheterization of all patients suffering from violence is an important procedure. If the bladder is distended with saline, sufficient must be used to distend the bladder and break up any adhesions between the bowel or the omentum and the torn edges of the rent in the bladder.

Radiograms of the chest and abdomen are indispensable. Ruptures of the diaphragm, pneumothorax, pneumoperitoneum, blotting out of kidney shadows by hemorrhage, are conditions that may be revealed. It is well to have the patient sitting up or at least turned on the side for these examinations. A radiogram, with the bladder distended with from 5 to 12 per cent sodium iodid, quickly confirms the diagnosis of a rupture of the bladder. Neo-iopax injected intravenously may help locate the injury of the kidney and show its extent. Also it may demonstrate which kidney should be explored, when contusions are bilateral, and either kidney may be at fault.

DIAGNOSIS

Diagnosis is always difficult in the patient who is most helped by intervention. Frequent examination and rechecking of the findings and of the laboratory work are essential, if the best results are to be had. Continuous abdominal pain and increasing tenderness must not be relieved by sedatives without a full realization of what may be causing the distress.

PROGNOSIS

The prognosis is always grave. Pollard in 1860 reported fifty-six cases. Seventeen and eighty-five hundredths per cent died in the first five hours, thirty-two and fourteen hundredths per cent died in five to twenty-five hours, thirty-three and ninety-four hundredths per cent died in twenty-four to forty-eight hours, sixteen and seven hundredths per cent died in from three to sixteen days. This latter group of sixteen and seven hundredths per cent contains the patients we are most interested in. Surgical intervention early in these patients will be rewarded by many recoveries. In this group are included the small perforations; the

mesenteric tears from which the intestine may later slough; the contusion of the bowel that later sloughs; and the ruptured bladder.

Curtis in 1887 remarked, "Recovery after a rupture of the intestine is a surgical curiosity." The same year Curtis conducted forty-four experiments in which the abdomens of anesthetized dogs were contused, with the following results: Thirteen lacerations of the mesentery severe enough to deprive the intestine of its blood supply; sixteen contusions of the bowel not perforating, but likely to slough later; and eight ruptures of the bowel, two of which were multiple. The seriousness of mesenteric tears is not in general appreciated, and these patients are observed until the bowel sloughs and peritonitis is instituted. Disturbances in blood supply from the mesenteric tears, not extensive enough to cause sloughing, may produce a round-cell infiltration of the bowel followed later by fibrosis; such fibrosis producing partial or complete obstruction. This condition was first reported by Dubbs and Maier.

The surgical intervention, in many of these patients, cannot be considered. The injuries are extensive and multiple, and the shock is extreme. A few come out of the shock under proper treatment and become fair operative risks. The high mortality must not close our eyes to the few that recover following surgical intervention. Bouilly reported the first operation for rupture of the intestine in 1883. The first successful operation was reported by Moty in 1889.

POINTS IN OPERATIVE PROCEDURE

When exploring the abdomen, complete relaxation and an ample incision are essential. Ether or subarachnoid block are the anesthesia of choice. If free, uncontaminated blood is encountered, it may be dipped out with a small ladle, or aspirated, citrated and run back into the patient's vein. If not sufficient blood is recovered to dilute the citrate solution, salt solution may be added. This is often a life-saving procedure. The small intestine is inspected carefully in a systematic way, beginning at the duodenojejunal angle and proceeding to the ileocecal valve. It is very easy to overlook small perforations, so it is always well to instruct the nurses, as well as the assistants, to watch closely. Next the stomach and colon are examined. Ruptures of the stomach are usually in the anterior wall and easily located. Rupture of the duodenum is infrequent, but swelling, bile discoloration, and emphysema in the region of the duodenum indicate a retroperitoneal rupture. The duodenum is easily mobilized, cutting the peritoneum to the right of the descending portion and rolling the duodenum to the left. If a retroperitoneal tear is present it is easily sutured. A rent in the anterior wall of the rectum is not infrequently present and must always be looked for.

The method of closure of any rupture is not so important, as long as the bowel is not constricted and there is not great tension on the sutures. Most openings in the small bowel are

closed transversely. A double row of plain No. 0 continuous catgut sutures are used in the bowel and the stomach, and three rows in the bladder. If resection is necessary in the small bowel, lateral anastomosis is preferred.

Suprapubic drainage of the bladder is always instituted in any rupture extra- or introperitoneal. If the extraperitoneal tears are small and difficult to locate, free suprapubic drainage will prevent extravasation, and suture is not necessary.

The peritoneal space is practically never drained. It is almost impossible to establish peritonitis experimentally unless some foreign material is left in. Multiple drains do not prevent general peritonitis, but tend to provoke localized peritonitis and many adhesions. Where the bowel is injured retroperitoneally, as in the duodenum or colon, a drain is always inserted into the retroperitoneal cellular tissues.

IN CONCLUSION

It is obligatory to look upon all patients who have been through a serious accident as seriously injured. It is ridiculous to continue to observe patients with abdominal distress, attempting to explain this distress by injury of the abdominal wall until an overwhelming peritonitis has been established. The diagnosis may be made if we use all the diagnostic aid at our disposal and we must not fall into the habit of pronouncing finally, following one examination, and that examination made shortly after the accident.

490 Post Street.

DISCUSSION

ALANSON WEEKS, M. D. (Fitzhugh Building, San Francisco).—Doctor Butler presents an excellent brief review of traumatic injuries to the abdomen. Under present conditions of everyday life, the surgeon sees an increasing number of such injuries and too much emphasis cannot be placed upon their proper treatment.

It is remarkable how extensive an injury the abdomen can withstand without suffering damage. We had within a few months four children at St. Luke's Hospital who suffered severe abdominal contusions. In all four instances, it was claimed that the wheel of an automobile had passed across the abdomen. All four children were operated upon, and their abdomens carefully explored. Such injuries as were found, however, would have healed without operation.

The next patient, an adult, refused operation and died of peritonitis due to a rupture of the ileum. As far as anyone could possibly read symptoms, these five patients were clinically identical. There was some shock, definite pain and rigor of the abdominal muscles, and marked elevation of the white blood count.

While the expression, "Let's operate," has enjoyed some humorous notoriety in certain popular publications, it remains for this type of patient the soundest advice. One way of expressing this experience is as follows: "If you operate unnecessarily (*i. e.*, find on exploration that conditions would have righted themselves) you are 1 to 5 per cent in error (for that is about the mortality of a simple abdominal exploration). If you do not operate (when subsequent developments indicate that you should have done so) your error is between 90 and 100 per cent."

As Doctor Butler so well emphasizes, when "watching" a patient, one is apt to watch until peritonitis is recognized.

Of course, a "good surgeon" (which expression covers the whole field, including a heart and sound judgment) never would operate upon one of these

patients with abdominal injuries when the patient is in shock and the added insult of further surgery would undoubtedly result fatally. He would endeavor, with transfusions and heat, to give his patient a chance.



FRED R. FAIRCHILD, M. D. (Woodland Clinic, Woodland).—Doctor Butler is discussing a subject, the importance of which entitles it to the most careful consideration.

The average layman finds it almost impossible to accept the fact that there can be any serious intra-abdominal injury where surface examinations fail to show evidence of material trauma. It is difficult for many physicians to feel apprehension under these conditions. Nevertheless, the fact remains that injuries of the greatest consequence may be inflicted to the intra-abdominal structures in the absence of any external evidence of violence. I recall very clearly a motorcycle accident in which not even a bruise could be demonstrated, but which resulted in death. Autopsy showed complete severance of the jejunum about seven inches below the ligament of Treitz.

Doctor Butler emphasizes the possibility of comparative absence of early symptoms even in lesions which may later result in peritonitis. This observation is certainly correct, the early symptoms frequently being not more suggestive than would be accounted for by a severe contusion. This, after all, is in keeping with what occasionally might be expected. In discussing this same subject before the Pacific Coast Surgical Association in 1930 ("Serious Intra-Abdominal Trauma Without External Evidence of Violence," *Surg., Gyn. and Obst.*, 52:767-775, March, 1931) attention was called to the fact that contusions might be severe enough to result in local death of a particular area in the intestine, but that some days might elapse before this devitalized tissue became gangrenous and permitted the escape of intestinal content into the peritoneal cavity. Under these conditions there is no reason why we should expect immediate signs suggesting a mortal injury.

Another point, which cannot be overstressed, is the importance of prompt surgical interference where there has been a rupture of a hollow viscus. It is not possible always to arrive at a positive diagnosis without permitting so great a lapse of time as to endanger the patient's life when the operative intervention is then instituted. In the paper above referred to, the following observations were made: "In these conditions an early or accurate diagnosis is not possible. If doubt exists as to the presence or absence of serious intra-abdominal lesions, the path of greatest safety lies along the line of immediate exploration."

We are indebted to Doctor Butler for again bringing this very important subject to our attention. May his discussion result in our accepting injuries, of the sort to which he has referred, as potentially more serious than our preliminary examination might lead us to expect, to the end that we will follow them closely beyond the time of possible serious complications.



JOSEPH K. SWINDT, M. D. (Pomona Valley Hospital, Pomona).—In discussing the traumatic lesions mentioned in this timely paper of Doctor Butler's I wish to say that my attention has been drawn particularly to that group which may result from impaling wounds about the anus. Such wounds have been produced by falls upon fence palings, pitchforks, bamboo stumps, etc. Injuries of this type are not common enough to breed familiarity. The penetrating object (often small in diameter and usually removed before the patient reaches the surgeon) produces a small wound of entrance, or none at all if entrance is directly through the anus, all of which does not excite much suspicion at first sight. The surgeon is apt to find himself un-

suspectingly confronted with a serious internal injury which may challenge his resources to the limit. Penetration of the bladder, ureters, peritoneum, bowel, stomach, liver, and even the diaphragm has been recorded.

In my case an eight-year-old boy at play jumped into a clump of bamboo and was impaled on a sharp stump. His mother removed a part of the splinter from near the right margin of the anus. A few hours later a doctor diagnosed the abdominal pain as appendiceal and removed a normal appendix through a rectus incision; urine escaped from the incision for two weeks, and dysuria became severe and continuous; four weeks after the injury, I removed from the bladder a six-inch bamboo splinter doubled like a hair-pin, lying free within the bladder.

Such an experience illustrates the importance of alert observation after any injury which may possibly involve the abdominal viscera. Forty-eight hours of rest in bed on absolute fast will allow symptoms to develop in a clear field. Prompt use of the cystoscope, proctoscope, and x-ray—the latter especially to show the presence of free gas in the peritoneal cavity—will reveal indications for surgical interference before serious damage has ensued. I would also like to emphasize the value of repeated white and red blood counts to indicate the eight- or twelve-hour progress of concealed hemorrhage or insidious infection in these cases.

COMPULSORY HEALTH INSURANCE*

By FREDERICK L. HOFFMAN
Philadelphia, Pa.

I

THE theory of compulsory health insurance is gradually gaining in this country, particularly among social service and welfare workers, all of whom show a strong inclination to extend the sphere of government into what has heretofore been strictly a field for private enterprise. Its development finds ready explanation in the fact that during the last twenty years the immense outpouring of literature on the British system of compulsory health insurance has made a wealth of data accessible to students not familiar with any other than the English and German languages. A favorable attitude in this matter is rarely the result of a critical consideration of the actual facts of the British experience, but rather a reflection of government reports which naturally present the subject in its most favorable aspects. Many essential facts concerning the situation are contained in the reports of the Ministry of Health, of which the latest one for 1932-1933 has recently become available.

SYSTEM IN ENGLAND AND WALES

In England and Wales the estimated number of insured persons is 10,444,000 men and 5,353,000 women, a total of 15,797,000. These figures undergo but slight changes from year to year, since the English population has almost reached a stationary condition. Nevertheless there has been an increase from 13,000,000 insured persons in

*The first of a series of articles on compulsory health insurance, written for CALIFORNIA AND WESTERN MEDICINE by the well-known consulting statistician, Frederick L. Hoffman.

1923 to 15,604,000 in 1932. The receipts of the system from all sources reached 31,619,000 pounds in 1932, while the expenditures for benefits in 1932 amounted to 26,773,000 pounds. Of the receipts, 21,382,000 pounds represented contributions of insured persons and employers, 5,081,000 pounds interest, and 5,156,000 pounds parliamentary grants.

Analysis of the expenditures for benefits shows that 9,247,000 pounds were paid on account of sickness benefits, 5,261,000 pounds for disablement benefits, and 1,405,000 pounds for maternity benefits. These are all cash benefits for the support of sick persons during the period of sickness. Strictly medical benefits, or benefits on account of medical attendance, etc., amounted to 8,469,000 pounds, while other benefits, chiefly of a medical nature, amounted to 2,391,000 pounds.

It is thus shown that huge amounts of money are involved in this undertaking which has radically changed the character of the British population from one of sturdy and wholesome independence to one of dependence upon the government not only for health insurance, but also for pensions and unemployment insurance, and other social advantages heretofore considered outside the scope of government administration.

Broadly speaking, however, the chief interest of the insurance is the cash benefits which imperceptibly merge into unemployment benefits or vice versa. In fact, the sickness rate for cash benefits increases proportionately with increased unemployment, and falls proportionately with its decline, proving conclusively that to a considerable extent alleged sickness is but a pretense to secure unemployment benefits for claimants possibly suffering from some slight ailment, which constitute the major portion of attendances.

WEAKNESS OF THE SYSTEM

What is true of England is true of Wales and Scotland, also of Northern Ireland and the Irish Free State. Drastic reforms have been introduced which have curtailed the amount of malingering which, nevertheless, must continue on a substantial scale. At best, the medical service is of mediocre quality in view of the large panels which give to the doctors a much larger number of patients than they can possibly attend to with thoroughness and skill.

SOME EFFECTS OF A COMPULSORY HEALTH INSURANCE SYSTEM

Not only has the system of compulsory health insurance changed the character of the British working people, but it also has had profound effects upon medical practice. An enormous amount of time in the aggregate is required by doctors concerning themselves with the economic aspects of the system as regards their own compensation, which is based on the number of patients on their panels. As emphasized in a recent treatise on "This Panel Business," published at London, 1933, the economic aspects of the system to the doctor

are of tremendous importance. The author observes: "The panel practitioner is financially a poor man; the doctors who are thriving on national health insurance work are rare." He, therefore, advises immediate organized action on the part of the medical profession so as to improve not only these conditions, but also for the greater purpose of saving itself from possible disaster. For this situation he claims the medical profession has only itself to blame, and that the apathy of the doctors themselves, even on vital questions affecting their very existence, has been appalling. But the conscientious physician thinks first of his profession and last of his personal interests. He cannot give attention to the endless number of questions that arise in connection with compulsory health insurance, even though they affect his financial interests. He is in duty bound to give primary consideration to his patients, which is the rule except on the part of a small group who play politics and seek advance of personal interests in a multitude of directions.

Quite appropriate are the remarks of the authors of another treatise on "The Way of Health Insurance," published by the University of Chicago Press in 1932, where it is said: "The framers of the earlier systems of legislation seem to have seldom recognized that the medical professions are the essential factor in the treatment of disease. The records of the formation of the insurance systems of the nineteenth century contain only the slightest reference to the part played by these professions in the preliminary planning that led to such legislation. Employers, labor unions, insurance societies, jurists and, of course, politicians saw that their special interests were protected. But the medical professions were seldom given even the courtesy of a consultation."

APPLICATION TO THE UNITED STATES

The situation in this country is duplicating the British precedent. An organization like the American Medical Association can give some attention to the economic aspects of compulsory health insurance, or the socialization of medicine otherwise, but the average practitioner is far too busy with his practice to enter critically into the countless discussions that are taking place. The *Journal of the British Medical Association* contains, week after week, all sorts of discussions on the practical aspects of compulsory health insurance which are rarely read by physicians, although they would find it to their interest to acquire some familiarity with the complexities of the British system; for it is that system, rather than the continental methods of social insurance, which is bound to have weight with American readers.

It is the purpose of these articles to present, from month to month, current aspects of British national health insurance as derived from professional or official sources, aside from certain textbooks on the subject which can be relied upon as authentic.

(To be continued)

THE LURE OF MEDICAL HISTORY*

"GOLD ALLEY" OR THE "STREET OF THE FAKERS"

By FELIX CUNHA, M. D.
San Francisco

THOSE who have visited Prague may recall a section known as the Hradschin, by St. George's Church, wherein is situated a narrow, steep street, no more than an alley, containing several small huts which are maintained today only to be shown to the tourist visitor. This tiny, short street, or alley, can recall unto itself a day when it was known far and wide over the then known world, a day when it attracted to its small almost make-believe houses, the greatest astronomers, mathematicians, physicians, philosophers, and alchemists from every part of the civilized world.

For this is the "Street of the Alchemists" or "Gold Alley." Later it came to be known by the more opprobrious name of the "Street of the Fakers."

The cause d'être of this world fame was the equally famous gullibility of the German Emperor, Rudolph II of Germany, who ruled here from 1576-1612, as King of Hungary, King of Bohemia, Emperor of Germany, and came to be known as the "Solomon of Bohemia." At the age of twenty-four he had succeeded to the throne and, despising the gay and frivolous life of Vienna, had returned to Prague, there to assume the rôle of a magnificent patron of the arts and sciences. He did not, however, as would a true scientist, pursue science for the purpose of increasing knowledge; the philosopher or astronomer were less welcome at his court than the charlatan who claimed to be able to produce gold from a base-metal by alchemical processes, or those who pretended to hold the formula of the "Elixir of Life."

ALCHEMY

Greed for gold was paramount with this sovereign, and to him who claimed ability to produce it was assigned a small shack wherein to work and money for experimentation; and the collection of these shacks just outside the palace gates formed this "Street of Alchemists." It acquired world fame, and this fame brought the curious, the credulous, the avaricious, the professional tricksters and thieves, like flies drawn to a tasty morsel.

"Nasty, soaking, greasy fellows,
Knives would brain you with their bellows;
Hapless, sapless crusty sticks,
Black, as smoke can make their bricks."

Alchemy was defined by this same motley crew as a "coquette inviting a flirtation, but denying favors; an art without any art, of which the beginning is avarice, the middle falsehood, and the end

either a beggar's staff or the gallows." Each one hoped to escape this end.

But, mixed among these fortune tellers, charlatans and tricksters were those of more serious mind, genuine artists in whose modest workshops the highest degree of art was attained, and a ready market for their wares found at the Court of Rudolph II.

Such were the gold and silversmiths, the engravers of precious metals, the cutters of precious stones, cameo cutters, wood carvers, illuminators of manuscripts, painters and sculptors.

Rudolph's particular fetish was alchemy, the transmutation of baser metals into gold; and although a patron of all arts, his particular hobby was gold, and so was his greed. This was nothing new; philosophers for centuries had written of the "Philosopher's Stone" and the "Elixir of Life." Some claimed to have found it, but lost it again; others claimed still to have the formula, or to know of somebody, somewhere who at some time had heard of somebody who knew it. As the formula carried with it immense riches, by reason of conversion of base-metals into gold, also long life, because the secret of youth was somehow attached to gold, it can be seen that diligent search for it would be the order of the day. Monarchs, with absolute power over their minions, would have fetched to them, at their bidding, any alchemist or pseudo-alchemist who had made claim to any discovery. "Goldwasser," that liqueur with flaked gold scattered through the contents, which once sold over all of Europe as a cure-all, the "elixir of life," and is still sold in some parts of Europe, originated with the chemists of this short street in Prague.

THEOPHRASTUS PARACELSUS

But this tiny alley was of importance to the medical world. The zenith and sum of all alchemists was, of course, the renowned Theophrastus Paracelsus. He had been called the "German Hermes," and was held in reverent memory almost as a god. Although he died in 1541, his influence was enormous and far-reaching. He had been the first to rebel against the school and doctrines of Galen; he had treated diseases with metals, gold-silver-antimony, and mercury; and the story had spread that he had cured many who had been given up to die, and also, by means of metals, had cured thirteen princes, whose cases had been given up for dead. After his death his pupils gravitated to all parts of the world and preached his doctrines. Many came to this "Gold Alley"; and although they committed great errors in their ignorance, they served to bring about the parting of the ways and the division of medicine into two schools of thought—the one of adherents to the theories of Galen, the other, of those preaching the "new idea" of Paracelsus. So it was that, in the nature of an illegitimate offspring of the multifold activities here, this came about.

TRANSMUTATION OF GOLD

Primarily and fundamentally everyone was concerned with discovering the means by which base-metals could be converted into gold. Alchemy was

* A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of CALIFORNIA AND WESTERN MEDICINE. The column is one of the regular features of the Miscellany Department of CALIFORNIA AND WESTERN MEDICINE, and its page number will be found on the front cover index.



"Gold Alley" or "Street of the Fakers," as it is today, practically unchanged from the time of Rudolph the Second, 1608.

the order of the day. The "elixir of life" and "aurum potable" (drinkable gold), which prolonged life, were the topic of the hour. The people therefore being "gold-minded," it can readily be seen that the groundwork for the change from the humoral theories of medicine to those which treated disease by the use of metals was fertile and ready. The psychology of the people was timely, so to speak.

So, to these small shacks in "Gold Alley," many of which are still standing, were assigned in particular those whose duty it was to work out formulae for transmutation of gold; and these shacks constituted their laboratories. Those who came here and claimed any special knowledge were given opportunity to prove their claims, and money was furnished to carry on experiments, much in the manner of our research grants of today, but with this difference: Woe to him who failed to fulfil his promise, because extreme torture and imprisonment was his lot!

Many tricksters came only to wheedle sums of money from the gullible monarch, and to escape before falling into his clutches; and many were the tricks resorted to in order to maintain their claims.

Some of these pseudo-chemists used double-bottomed crucibles, the false bottom being made of crucible dust and wax in two layers, with true gold between, so that when the crucible was exposed to the heat of fire the wax layer melted and the gold lay in the bottom of the crucible.

Another method was to have a hollow rod for stirring the ingredients of the crucible, the end of the rod being stoppered with wax, which melted

easily in the heat of the fire; and gold powder secreted in the rod was thus transferred to the bottom of the crucible.

Others made a compound of gold and mercury known as amalgam; and this, when heated to a high temperature, allowed the mercury to evaporate in smoke, leaving the gold behind.

Paracelsus himself had been a firm believer in the virtues of gold medicinally, and also that the "elixir of life" was composed of gold. He had stated that the search for the "Philosopher's Stone" represented the "Golden Fleece" of the Middle Ages, and that it was composed of gold in some altered form. When asked for his description of the "Philosopher's Stone," he portrayed it as "a solid, the color of a dark ruby, transparent and flexible, yet as brittle as glass, able to transform one hundred times its weight of mercury into gold."

FOUNDATION OF CHEMISTRY

Yet in spite of this great ignorance, and in spite of the large amount of pseudoscience and humbuggery, this alley contributed a startling array of new theories, new discoveries of immense value to all of the sciences in the years following. During the years of Rudolph's reign, there was exerted from here a tremendous influence upon the medicine which was to follow. These late years of the sixteenth, and early years of the seventeenth centuries found medicine at a crossroads. The adherents of Paracelsus had become clamorous for the overthrow of the theories of Galen; and as they were in greater numbers, they succeeded in accomplishing this to no small degree.

They served to break the hold of Galenism upon the existing medical thought and, in so doing, paved the way for our modern school of chemistry. This was fortunate for medicine, because it shook medicine out of its rut and pushed it forward and onward. So the charlatans, the tricksters, the alchemists served their purpose in that, through keeping alive an interest in alchemy, a school of chemistry was born.

SOME CONTRIBUTIONS OF "GOLD ALLEY"

But let us examine some of the contributions of this "Alley" to science in general. It was here that monks worked laboriously, translating the old secret manuscripts and formulae, preparing in beautifully illuminated script translations of Aristotle, Albertus Magnus, Thomas Aquinas, Roger Bacon and others, that formed the true link in the transition of these from the dead languages into later and more modern tongues.

Astronomy.—But, to name some of the discoveries, some of the valued contributions. It was here, in this "Alley," that John Kepler explained the physics of the eye and the action of lenses. Kepler was an astronomer, a graduate of the University of Tübingen, who had been called to Prague by Emperor Rudolph as assistant to Tycho Brahe, "the greatest of astronomers." It was here that Kepler promulgated his "Laws," three in number, still vital in astronomy. Here he improved the telescope by inserting two convex lenses, thus increasing the field of view. He was the originator of the present-day "Farmer's Almanac." Being much in need of funds, he published what he described as "a vilely, prophesying almanach, which is scarcely more respectable than beggary." He was a serious worker and thinker, and was against the idea of prophesying by the stars and also against prostituting his science.

Clinical Thermometer.—It was asserted that the first clinical thermometer was invented here by a fanatic named Drebbel, who also claimed that he had solved the problem of perpetual motion.

Medical Treatise.—One of the first treatises in medical practice was announced here by Dr. Oswald Croll, physician to Rudolph. One of his principles was that "it is the principal duty of a physician to comfort the heart, and afterward assault the disease."

Sexual System in Plants.—From here a Bohemian naturalist, Zaluzansky, discovered the sexual system in plants, thereby anticipating Linnaeus.

Camera.—A Jewish rabbi, Zezalel Loew (the Roger Bacon of the Jews), experimented secretly with a camera; but due to the possibility of being accused of being in league with unholy spirits, the penalty for which was death, no public announcement of his experiments was ever made.

Power of the Mind.—Christian Science might almost claim its foundation here. Paracelsus had preached the power of mind over body, and his disciples stressed it even more than he—discipline of the mind also.

Elixir for Epidemics.—Tycho Brahe, the great astronomer of the Middle Ages, also dabbled in medicine, as most physicians were astronomers; it being declared that physicians ignorant of astronomy were no better than murderers. He had invented an elixir, and this was widely sold as a preventive against the epidemics which raged over Europe. It consisted mainly of antimony.

Brahe was the defender of Egyptian astronomy and the exposition that the earth was the center of the universe; which served to stimulate the researches of his young assistant, Kepler, who, however, in time became convinced that the theories of Copernicus, in which the sun was the real center, were more correct, and this indirectly influenced his discovery of the so-called Kepler's Laws.

Gems and Dyestuffs.—Boethius contributed his great "History of Gems and Stones." Libavius lectured here and gave his formula for the production of that "mystery of mysteries, most secret of all secret things, and healing and medicine of all things," and as a by-product, "the fuming liquor of Libavius" was discovered, the superb red dyestuff obtained by the action of tin salts on cochineal.

Zinc and Drugs.—To Paracelsus is given the credit for discovering zinc; but his followers, working at mixing all known chemicals in different ways and treating these chemicals in different manner (true, without any intelligent system), obtained hundreds of the substances now used in medicine, pharmacy, etc., and most of these under the patronage of Rudolph in the "Street of the Fakers."

These are not all, but serve to illustrate merely that contributions to medicine were made from this so-named "street"—being expressions of the useful outcroppings of a pseudoscience, the indirect influence of alchemy, and the influence of a greedy monarch in the rôle of a patron of science.

450 Sutter Street.

CLINICAL NOTES AND CASE REPORTS

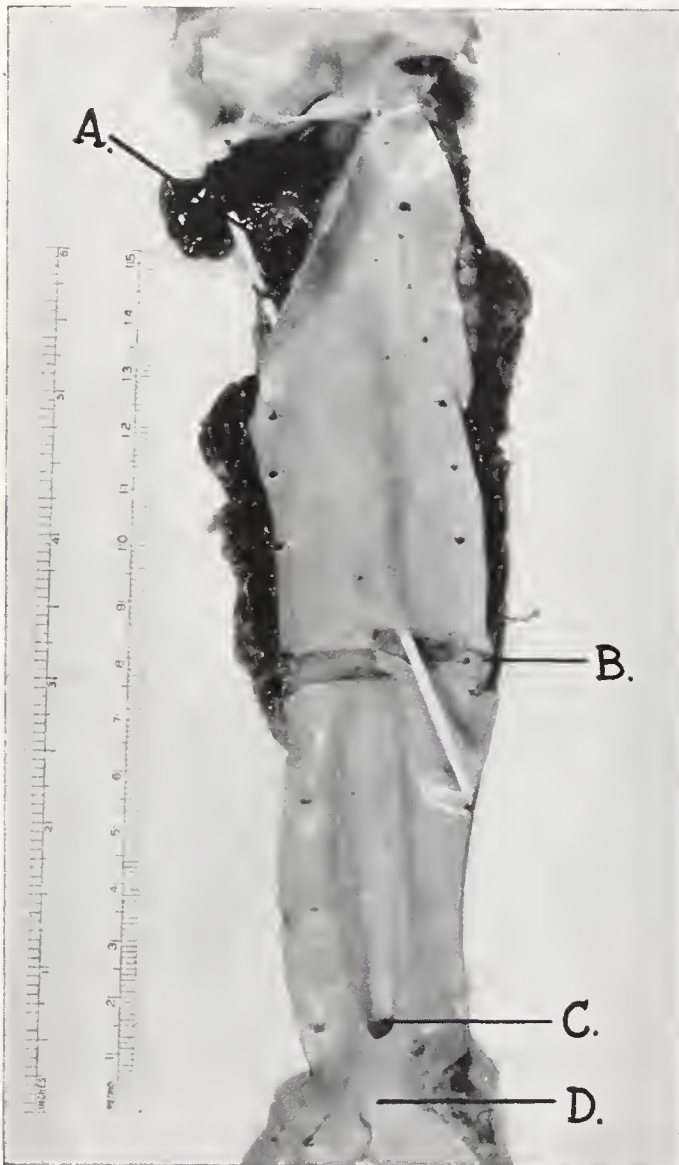
SPONTANEOUS RUPTURE OF THE AORTA*

A CASE REPORT

By LEON ROSOVE, M. D.
Los Angeles

A CASE REPORT of spontaneous rupture of the aorta, with a dissecting aneurysm in early life, is of unusual interest because of its rarity and its perplexing pathogenesis. Klotz and Simpson,¹ in a recent analysis of cases collected from the literature, found only nine cases in individuals under twenty years of age, and thirty-three cases between twenty-one and forty years. We have recently observed an instance of this condition, unsuspected during life, but found at autopsy.

* From the department of pathology, Los Angeles County General Hospital, Unit No. 1; Newton G. Evans, director.



The descending aorta and common iliac arteries. The transverse rupture, just above the diaphragm, is shown with the dissecting aneurysm and intramedial accumulation of blood, extending from the isthmus downward to involve the iliac arteries.

A.—Point of rupture of the dissecting aneurysm into the mediastinum. B.—Transverse rupture of aorta, just above diaphragm. C.—Celiac axis. D.—Bifurcation of aorta.

REPORT OF CASE

History.—R. B., a white, male clothes presser, eighteen years nine months of age, entered the Los Angeles County General Hospital May 2, 1933, at 1:12 p. m., complaining of paralysis of both lower extremities of two hours' duration. He felt well on arising the morning of admission. At 11 o'clock, during an unoccupied interval, while in a recumbent position, he noted that peculiar sensations had suddenly appeared in both lower extremities, associated with pain in the upper thighs. He stood up and attempted to walk in an effort to overcome the pain, and noted an impairment of locomotion. Reaching the telephone with great difficulty, he summoned an ambulance and was taken to an emergency hospital, where he remained a short time. He was subsequently admitted to the contagious unit of the Los Angeles County General Hospital, with diagnosis of acute paraplegia and possible ascending Landry's paralysis. There had been no headache, vomiting, visual disturbances, nor stiffness of the neck. He gave absolutely no history of recent trauma or severe exertion. The past history revealed that he had had measles and varicella during childhood. The history by systems was irrelevant.

Examination.—The patient was well nourished, well developed, and muscular. The skin was pale and moist. His respirations were slightly accelerated. The temperature was 98.6 degrees Fahrenheit; pulse, 72

per minute; blood pressure, 140 systolic, 40 diastolic (a pulse pressure of 100). There was a pustular eruption on the back of the upper thorax, apparently acne vulgaris. The pupils reacted sluggishly to light. There was no neck rigidity. The lungs were clear. The heart was not enlarged, but there was a definite systolic murmur over the precordium, most marked at the apex. No examination was made for pulsating vessels in the lower extremities. The abdomen was essentially normal. Both lower extremities were completely paralyzed, definitely cold, and presented a livid, mottled appearance. All sensation up to a level midway between the umbilicus and symphysis pubis was lost; the patellar and Achilles reflexes absent; the biceps and triceps slightly hyperactive. No pathologic reflexes were elicited.

The spinal fluid was clear and colorless, with an initial pressure of 225 mm. water. It contained a few cells, but no organisms were found on smear and culture. Blood and spinal fluid were collected for culture, Wassermann and Kahn tests; they were subsequently reported negative. The colloidal benzoin was 000002320000000.

Course.—A probable diagnosis of transverse myelitis was made, and the patient transferred to the neurologic service. During the physical examination and spinal puncture, he complained of severe pain in the neck. He was made comfortable in bed. At 7 p. m. the nurses' chart recorded the temperature, pulse and respirations normal. One-half hour later he was quiet, but unable to sleep. At 8 p. m. he suddenly sat up in bed and cried, "My heart!" became very pale, gasped for breath and expired, nine hours after the onset of the initial symptoms.

Postmortem Examination (performed May 3, 1933, eleven hours after death).—The body was that of a well-developed and well-nourished, muscular, white male, weight 163 pounds, height 5 feet 8½ inches. There was slight acne over the posterior trunk. There was no evidence of discoloration or gangrene of the lower extremities.

The most significant changes were discovered in the aorta, which was found to be the site of an extensive dissecting aneurysm, extending its entire length from the isthmus downward and involving the common and external iliac arteries on both sides. Immediately above the diaphragm was a complete transverse circular rupture of the intima and inner half of the media, which was unquestionably the portal through which the blood gained access into the medial layer in the formation of the aneurysmal tract. The edges of the ruptured coats were for the most part smooth, but presented slight irregularity in their anterior portion, conveying the impression that the lesion had been produced by expansile force. The extravasation was entirely intramedial, the lumen of the aorta being thereby narrowed as a result of the presence of an annular column of blood, varying from 0.5 to 1.5 centimeters in thickness, almost completely encircling the vessel. The lumen just above the bifurcation was almost entirely occluded by the intramedial accumulation of blood. In addition, blood had escaped into the areolar tissue of the mediastinum, and had dissected along the intercostal spaces. The extraperitoneal tissue over the posterior abdominal wall, and the right side of the urinary bladder were likewise affected, as was also the tissue under the ligamenta flava of the vertebral column, particularly in the thoracic region. No narrowing of the vertebral canal, however, was thereby produced.

Directly below the isthmus on the left side, the outer coat of the aneurysmal sac was found to be ruptured. From this opening, blood had escaped under the left mediastinal and left posterior parietal pleura, producing what may be properly termed a massive extrapleural hematoma containing about 1.5 liters of blood. The hematoma elevated the posterior parietal pleura, causing a large perforation at its inferior angle, establishing a communication between the mediastinal hematoma and the pleural cavity which contained approximately two liters of partially clotted blood.

The aorta was abnormally short, measuring 24 centimeters from its origin to the bifurcation, and 17.5 centimeters from the isthmus to the bifurcation, approximately one-half the normal length. The greatest circumference of the arch measured 6 centimeters; the greatest thickness of the aorta in this region, 0.2 centimeter. The aorta appeared slightly hypoplastic, the intima smooth and glistening, with no discernible evidence of atheroma, sclerosis or aortitis. The bifurcation was situated 6 centimeters below the aortic opening of the diaphragm, and approximately 7 centimeters above the body of the fourth lumbar vertebra. The major visceral abdominal arteries arose anomalously, the celiac axis from the aorta immediately above the bifurcation, the remaining vessels from the left common iliac artery. Each common iliac artery, in addition, gave rise to segmental parietal vessels, presumably corresponding to the lumbar segmentals of the normal aorta.

The heart weighed 360 grams and appeared grossly normal. The left lung was compressed and the mediastinum displaced to the right. The thymus was persistent, moderately hyperplastic for the patient's age, and measured 5 by 3 by 1.5 centimeters in diameter. The mediastinal and abdominal lymph nodes were not hyperplastic. The remaining parenchymatous organs showed moderate cloudy swelling and hyperemia. The spinal cord and brain were found grossly normal.

Microscopic Examination.—Spinal cord. Sections taken from different levels, stained by the myelin sheath method and with hemotoxylin and eosin, failed to reveal any noteworthy pathologic changes. There was no unusual hyperemia. An acute swelling of the oligodendroglia was present. The anterior horn cells were normal in size and shape, and there was no great loss of chromatin material.

Heart. Section taken from the interventricular septum showed marked fragmentation of the myocardium and early cloudy swelling. The coronary vessels showed no noteworthy pathologic changes.

Aorta. Numerous sections taken from the aorta at various levels, and stained with hemotoxylin and eosin, and elastic tissue stain revealed that separation had occurred within the substance of the media, approximately in its mid-portion. Along the region of the dissecting aneurysm there were occasional areas of focal necrosis in the media, infiltrated with polymorphonuclear and occasional mononuclear cells. The intima revealed no atheromatous changes. The elastic lamellae of the media appeared normal. The vasa vasorum appeared normal. There was no increase in fat as demonstrated by Scharlach R. No abnormalities were discernible in sections taken from the arch of the aorta above the dissecting aneurysm.

COMMENT

This case conforms clinically in many of its aspects to the criteria necessary for the diagnosis of dissecting aneurysm. The clinical picture has been excellently described by Gager,² being characterized by a sudden onset, usually following strain; a severe, continuous pain like that of coronary occlusion and often with significant distribution in that it progresses well in advance of the dissection; anomalies of the circulation, such as inequality or absence of arterial pulsation in various regions, and the evidence of disturbed circulation in other organs or parts of the body.

In our patient the onset was sudden, but apparently did not follow strain or exertion. Pain, although present, was not severe, possibly because the location of rupture was just above the diaphragm and not in the ascending aorta or arch. The paraplegia and complete loss of reflexes with anesthesia of the lower extremities were the most significant phenomena. In a dissecting aneurysm

of the aorta, numerous intercostal arteries are usually torn; the nutrition of the spinal cord, otherwise supplied only by the vertebral arteries, is thereby impaired and paraplegia may ensue. Such cases have been reported by Crowell,³ who also quotes Dickenson, McCallum, Barhdt, and Todd.

It is of interest to note that in the forty-two cases under forty years of age, analyzed by Klotz and Simpson,¹ only one ruptured in the thoracic portion of the aorta, thirty-three in the ascending aorta, six in the arch, and two in unspecified regions. Thirty-two cases ruptured into the pericardium. The site of rupture in our case was in the thoracic aorta, above the diaphragm. Death resulted from profuse hemorrhage into the left mediastinum and pleural cavity.

The pathogenesis is an intriguing problem. We may exclude mechanical injuries, external violence, abscess of the aorta, adjacent tuberculous lesions and atheromatous changes, in considering the probable etiologic factors in our case. Tyson,⁴ and, recently, Kellogg and Heald⁵ believe that degenerative foci in the media are essential for the development of a dissecting aneurysm, and that these changes are secondary to partial or complete obliteration of the vasa vasorum from arteriosclerosis, or from a low-grade inflammatory process. Whitman and Stein⁶ quote and corroborate Babes and Mironescu, that the condition is almost a disease entity, characterized by degenerative changes in the media, a nonsyphilitic dissecting mesoarteritis or "mesarteritis dissecans." Our case did not show degenerative changes in the media, but rather small areas of necrosis infiltrated with polymorphonuclear cells and a few monocytes of questionable significance. This reaction probably represented a response to the extravasation and tissue destruction, which had been present for at least nine hours before death. It is obvious, however, that if a tear or a dissecting aneurysm passes through small preëxisting lesions in the aortic wall, little may remain to indicate the condition of the vessel before rupture.

Congenital anomalies have been suggested as an etiologic factor in the formation of dissecting aneurysms, foremost of which is thymico-lymphatic constitution with aortic and cardiac hypoplasia. The abnormal shortness, anomalous bifurcation and hypoplasia of the aorta, associated with an enlargement of the thymus, in our case, may have been contributory factors in the causation of the rupture.

While the actual agencies involved in the production of rupture and aneurysm in this instance must remain in the realm of speculation, we feel inclined to regard the shortness, hypoplasia of the aorta and anomalous bifurcation as material factors. Some unknown influence in the nature of unrecognized stretching and internal violence, or possibly changes in the vasa vasorum not grossly or microscopically detectable, may have been superimposed.

SUMMARY

A case is reported, of spontaneous rupture of the aorta of undetermined etiology, occurring just above the diaphragm, with the formation of a

dissecting aneurysm and extravasation of blood into the circumjacent tissues, resulting in a fatal mediastinal hemorrhage and left hemothorax.

1100 North Mission Road.

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THE INTENTIONAL SIMULATION OF PERINEPHRITIC ABSCESS AND ACUTE APPENDICITIS

By FRANKLIN R. NUZUM, M. D.
Santa Barbara

THE following instance is unique in the use of knowledge to simulate perinephritic abscess and acute appendicitis. A third-year student nurse, aged twenty-four years, gave a history of having scratched her left arm while pinning on the cuff of her uniform, the scratch occurring in an old scar resulting from radium treatment of a birthmark. The scratch was at such a location that the sleeve and cuff of the uniform continually rubbed it while the patient was at work.

REPORT OF CASE

Patient was admitted to the hospital on March 3, 1930, at which time the arm was red, indurated, and hot. The temperature was 101, pulse 88, respiration 20. Leukocytes were 15,500, of which 90 per cent were polymorphonuclears. The urine showed a trace of albumin. On March 8, tenderness and swelling developed in the left flank. Heat and redness were also present. A perinephritic abscess was suspected, secondary to the infection in the arm. This swelling gradually subsided and had practically disappeared on March 16.

On March 18, the patient complained of severe pain in the right lower quadrant of the abdomen. The temperature at this time was 104; the leukocyte count, 25,500, of which 92 per cent were polymorphonuclears. There was marked tenderness over McBurney's point and very definite spasm of the right rectus muscle. Nausea was present and the patient vomited on several occasions. Rectal examination gave negative information. A surgical consultant made a diagnosis of acute appendicitis and advised operation. At operation an incision made through the right rectus muscle demonstrated a marked edema in the subcutaneous tissues. There was no pus. Exploration of the abdomen was entirely negative. A normal appendix was removed. An inflammatory reaction developed about the wound. Probing of the wound on subsequent days revealed no pus. On April 3, approximately two weeks after operation, probing resulted in the discharge of a large quantity of greenish-yellow foul pus. Culture revealed a hemolytic streptococcus, beta type, and a gamma streptococcus. Following drainage, the wound healed, and the patient was discharged on April 16.

After her discharge from the hospital it was learned from this patient that both the perinephritic abscess and the appendicitis were simulated by her. Dreading a temporary service in another hospital, required of all student nurses, she took saliva from her own mouth and injected it with a Luer syringe and a long needle into the left lumbar region. When it became evident to her that this condition was being handled satisfactorily and she was beginning to recover from it, she injected saliva into the right rectus muscle over McBurney's point.

In her confession she stated that she feared someone might observe the needle-puncture wound in the skin in either instance. Later, after the onset of pain and tenderness in the right lower abdomen, she was fearful that the needle had penetrated the peritoneum and that an acute peritonitis was developing. Even when beset with these fears, it did not occur to her to acquaint anyone with what had happened.

The likeness of the clinical picture to appendicitis as recorded above was very striking.

Following psycho-analytical care, this patient was judged to have a constitutional psychopathic personality.

Cottage Hospital.

AN IMPROVED CERVICAL BRACE

By STEPHEN T. RAGAN, M. D.
Los Angeles

THE hazard of automobile traffic, the frequency of aeroplane crashes, the showmanship in wrestling matches, and the spectacular in football contests, have greatly increased the incidence of cervical fractures during the last decade. Many of these patients die early from accompanying cord damage, but a great number sustain fractures of the body, the processes, the laminae, or the pedicles, without showing evidence of paralysis below the area of trauma. After preliminary hospitalization, during which period a suitable brace is fitted, such patients do well upon ambulatory treatment.

In the manufacture of our cervical brace, a plaster cast of the cervical and upper dorsal region is made. This extends from the lower lip anteriorly, and the mastoids posteriorly, down the torso to the eighth rib. From this model, plates of twenty gauge duralumin are made to fit the chin, occiput, chest, and shoulders. Metal tubing is extended downward from each side of the chin and occiput plates, to slip over three-sixteenth-inch spring alumin rods, extending upward from the chest and shoulder plates. The rods are threaded, and carry lock nuts for height adjustment. Contact sides are padded with quarter-inch felt, covered with light horse hide, and an outside trim of light sole leather is sewed in place. One-half-inch straps and buckles connect chin to occipital plate, and breast to shoulder plate. At the inferior border of the apparatus, a one-inch webbed strap encircles the thorax to prevent slipping. The total weight is twenty-nine ounces.

Because of fit and easy adjustment, absolute immobility is assured. Ventilation is adequate.



Fig. 1



Fig. 2

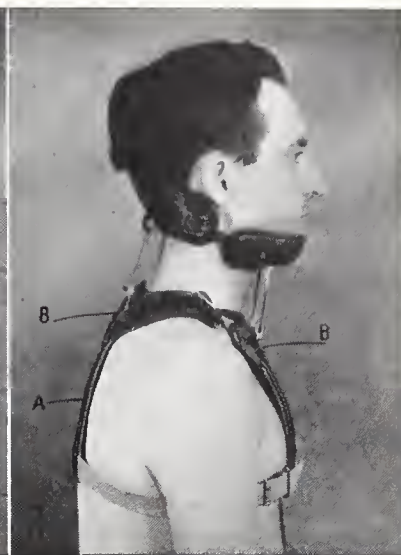


Fig. 3

Fig. 1.—Front view. The chin piece (a) connects with ventilated chest plate (b) by adjustable rods.

Fig. 2.—Rear view. The occiput piece (a) connects with the ventilated shoulder plate (b) by adjustable rods (c). Straps and buckles (e) hold the apparatus in place.

Fig. 3.—Side view. (a) The weight of the apparatus does not rest upon muscle borders or upon important nerves. (b) Either half is removable for convenience in bathing, shaving or hair-cutting.

The weight of the apparatus and sustained anatomical parts rest comfortably upon the broad surfaces of the pectorals and trapezii, and not upon the thin superior borders of these muscles, nor upon the clavicles. There are no pressure points, and discomfort about the cervical plexus is minimized. A strip of gauze may be placed in the chin and occipital recesses, and this is changed frequently to insure cleanliness. Either half of the brace may be removed for convenience in shaving, hair cutting, or bathing.

Pain in any of the nerve units making up the cervical or brachial plexus may be a distressing early symptom, but this is usually transient in character. A persistence would indicate a compression of nerve root by bony fragments, and a gradual increase in intensity would suggest the impingement of a nerve root by callus.*

6331 Hollywood Boulevard.

CIRCUMCISION OF YOUNG CHILDREN

By EDWIN F. PATTON, M. D.
Los Angeles

A QUESTION about which there is a confusing variety of opinion is: To circumcise or not to circumcise a growing boy. The situation involves both medical and surgical considerations, but the answer is easy. Individual cases fall into three categories: (a) urgent, (b) desirable, and (c) unnecessary.

Criteria cataloguing a case as urgent are:

Phimosis making retraction difficult and favoring adhesions and retention of smegma.

Paraphimosis, of any degree.

Recurrent or persistent balanitis.

Redundancy of prepuce to the extent of hiding the meatus, retaining the last drop of urine, and

keeping preputial tube or meatus macerated or irritated.

Circumcision is desirable when the case presents:

Tendency to recurrence of adhesions of prepuce to corona, in spite of one or more forcible retractions and stretchings.

Redundancy interfering with cleansing, but not with retraction.

Circumcision is unnecessary when:

With penis lying normally, meatus is exposed, clearing prepuce by a quarter inch or more in all directions.

Retraction and cleansing are free and easy.

Circumcision of girls can be summed up in one statement: It is never justifiable, except in case of rare congenital abnormality. Even forcible preputial retraction in girls is never justifiable, unless the adhesions are so dense that they can be broken up only by instrumentation. At the right time, accelerated secretion of smegma ordinarily accomplishes this separation, and common efforts of cleanliness maintain it.

Results of circumcision, aside from relief of local irritation, facilitation of erection, improvement of access for cleanliness, and cosmetic appearance, are practically nil. Promises that enuresis, masturbation or "handling" will cease after circumcision cannot be made with real assurance. When circumcision is done, the object should be to convert a case in Class A or B into one possessing the characteristics described under Class C, namely, exposed meatus and free retractibility.

The time to circumcise is as young as possible. The younger the patient the less the scarring, and the more favorable the course and result. Babies up to three months of age can be operated upon without anesthesia; anesthesia between three and six months is optional; after the age of six months anesthesia is required.

3875 Wilshire Boulevard.

* The cervical brace here described is made by M. J. Benjamin, 514 Paramount Theatre Building, to whom I am indebted for assistance in mechanical details.

RETENTION OF SILKWORM-GUT PESSARY

By CLEMENT H. ARNOLD, M. D.
San Francisco

THE patient, Mrs. ———, age thirty-six, was referred to us for profuse and painful menstrual flow.

History.—Patient stated that she had one child, living and well at twelve years of age, during whose birth she suffered tears of her vagina and cervix due to the use of forceps; she had had one stillbirth two years previously, and one abortion in between. At that time she was residing in China, and was unable to receive the proper attention following these obstetrical misadventures; that she suffered from almost continual pelvic pain.

Examination revealed a moderately relaxed outlet, a very narrow pelvis and an enlarged cervix with a deep lateral laceration; a very large erosion occupying the whole of the superior cervical lip, with a profuse discharge which proved negative for any specific infection. The uterus was slightly enlarged, in good position but difficult to feel bimanually; and there was a probable intramural fibroid on the left side.

For the time being, she was given a douche with silver nitrate applications to the erosion, and told that, considering her age and her history, a diagnostic curettage was indicated, to be followed, possibly, by a subtotal hysterectomy.

Upon her return to the office a few days later, she recalled that in 1925 a German doctor in Shanghai had treated her for dysmenorrhea by inserting into her uterus what she called a "wire pessary," fastened together by fine platinum wire at the top, and that it had been *in situ* ever since.

I must admit some slight skepticism, but an x-ray was taken to locate, if possible, the platinum wire. The x-ray was made by Doctors Ingber and Rodenbaugh, and the reproduction (Fig. 1) shows the wire coil apparently in the left cornual portion of the uterus. Upon this and other considerations, it was decided to perform a subtotal hysterectomy. This was done on January 12, 1933, Dr. David Susnow assisting, at St. Mary's Hospital. The cervix was thoroughly cauterized and the external portion "stripped" with the



Fig. 1.—Wire coil in left corner of uterus.

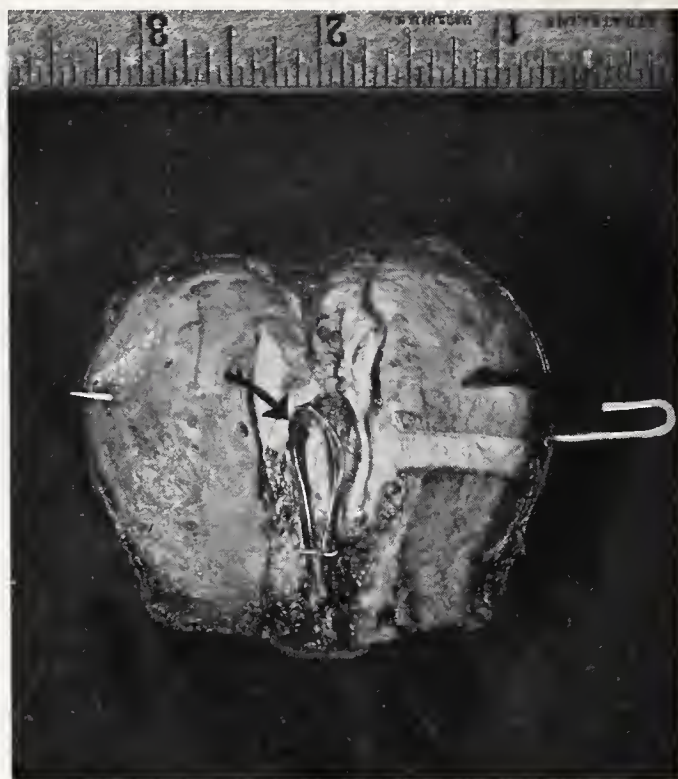


Fig. 2.—Coiled gut in cavity of uterus. Arrow points to platinum wire.

cautery to promote healing and contraction of the lacerated lips, and the uterus removed.

The uterus was found to have two intramural fibroids, to be interstitially fibrosed throughout (report of Dr. Elmer Smith, pathologist, St. Mary's Hospital); and on opening the uterus, the silk-worm-gut pessary was found coiled within the fundus, the tip with the platinum wire fastening the apices of the bent pieces lodged in the left cornual ostium. The photograph (Fig. 2) of the specimen shows the coiled gut in the cavity of the uterus, the arrow pointing to the platinum wire binding the silk-worm-gut strands together.

Close inspection reveals that the silk-worm gut is so tied that the ends are knotted, with a small piece, or claw, projecting; so that when placed in the canal, they would open out slightly with the ends so formed engaging the endocervix and preventing natural expulsion. It is interesting to note that the pessary worked its way up into the cornual end of the uterus; that the silk-worm gut shows no signs of change or absorption, and that there is, microscopically, only a slight hypertrophy of the endometrium.

COMMENT

The patient later further stated that this doctor told her that the rationale of the method was to insert a foreign body into the uterus so that it would cause continued effort upon the part of the uterus to expel the same, thereby developing the uterine musculature, and so relieving menstrual pains. She stated that it was successful in that respect until one year ago, when her pains returned and bleeding began; but that she forgot that the pessary was in place, and had not been where it could be removed with safety. It is interesting to compare the explanation of this rationale for a rather bizarre procedure with that offered for placing a silver-stem pessary in an anteverted infantile or juvenile uterus for the same reason.

The patient's postoperative course in the hospital, except for a slight wound infection, was uneventful, and she is today (January, 1934) perfectly well.

490 Post Street.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

DIARRHEA IN INFANCY

ALFRED J. SCOTT, JR., M. D. (1401 South Hope Street, Los Angeles).—*Etiology.* Infancy is generally considered as the first two years after birth.

Diarrhea is defined by Dorland as "An abnormal frequency and liquidity of fecal discharges." A normal breast-fed infant may have three or four daily stools, yellow in color, of the consistency of butter at room temperature, and containing numerous small yellowish or white fat curds. This is not abnormal, and is not considered as a diarrhea. The infant may be gaining and happy.

However, if the stools are watery, greenish in color and contain mucus, and the body weight is stationary or even with a loss, the condition would be considered a diarrhea.

Diarrhea is a symptom and not a disease. The causes may be divided into two general classes: enteral, where the trouble is in the bowel; and parenteral, where it is outside the bowel. Enteral factors may be: food, foreign bodies, pathogenic bacteria, parasites, and cathartics. Parenteral: Irritating conditions, like weather that is too hot or too cold, improper clothing, infections, or reflex conditions in susceptible infants, as dentition.

Enteral Factors.—In a breast-fed infant, an increase in the daily number of stools may be due to too frequent feedings, irregular feeding hours (as nursing whenever the infant cries), or feeding every three hours as recommended by some physicians and mothers. This results in indigestion and an increase in the number of bowel movements, an attempt on the part of the bowel to rid itself of the products of incomplete digestion.

In the artificially fed infant the formula may not be proper for the particular infant. It may be uncooked milk, too high in fat content or too rich in a laxative sugar, or a combination of all of these. Too much fat will first constipate, due to the formation of soap stools; later the bowel attempts to rid itself of these irritating masses and diarrhea results. Perhaps the formula is too rich in lactose or one of the high malt sugar combinations, or the quantity of food at each feeding period may be too much for the capacity of the stomach. The feeding schedule may be every three hours. Any one or all of these conditions results in an irritation of the bowel, lack of proper digestion and a diarrhea.

Foreign bodies, as a cause of diarrhea in infants, are not of such importance in the early months of life as later when the infant is able to crawl or walk, and pick up articles and put them in the mouth. Occasionally a small toy or part thereof may be swallowed. Due to the lack of esthetic sense, there is no discrimination between good and bad objects which may be put into the

mouth or chewed. Substances that may find their way to the gastro-intestinal tract are sand, shells, pebbles, snails, and even dried scybala. The bowel attempting to rid itself of these irritating articles increases its movements, and the discharges are watery in character with mucus and, if much irritation, some specks of blood. Usually any article that can be swallowed can be passed per rectum. The length of time required for the passage of the substance depends upon its size and character.

Cathartics which the mother uses may affect the breast-fed infant. These comprise the usual magnesia or aloin preparations. The drugs seem to be transmitted through the milk.

Where cathartics are used frequently and repeated, there may be an irritation of the bowel with diarrhea. This is seen in the excessive use of castor oil, given without medical supervision.

Pathogenic bacteria, such as the typhoid group, are not encountered so often today in infants; but in the past when a mother who was nursing an infant developed typhoid fever, the infant might contract the disease also. When an infant is not breast-fed, the disease may be contracted through unboiled infected milk or water. The same applies to the paratyphoids as well as the colon bacillus infections. We have seen cases of colon bacillus infections from well water on a ranch where the water had been contaminated by sewage. The diagnosis is made by bacteriological studies and these should be pursued in all cases of diarrhea where there is a high temperature, or where the symptoms point to an infection. The dysentery type of diarrheas are usually small epidemics rather than sporadic cases, and are diagnosed positively by laboratory study. The source of infection in all these cases of dysentery may be from a carrier, or through soiling with sewage fruits or vegetables which may be eaten raw.

The parasitic type of diarrhea is not common in infants, but does occur, and is diagnosed by careful laboratory study. The source of infection may be from carriers, or fruits or vegetables contaminated by sewage or infected persons. Infection by animal parasites occasionally occurs where infected animals lick the face or hands of an infant, and the latter may transmit the ova to their own gastro-intestinal tract.

Parenteral Causes of Infantile Diarrhea.—Extreme hot weather causes much suffering among infants, particularly if there is no cooling off during the night. If the nights are cool, the infant has a chance to digest its food properly; but if there is no rest, the food acts as an irritant and a looseness of the bowels results. This would lead to the thought of an enteral condition, but the primary cause is the hot weather, a parenteral con-

dition. The same applies to the infant who is either wrapped or dressed too warmly in any type of weather, especially warm weather where evaporation from the skin is inhibited. In cold weather overheated rooms with improper ventilation may have the same results.

Infections, such as an acute head cold with temperature rise, may be accompanied by diarrhea. The onset of some diseases, as the so-called "flu" or influenza, may be and frequently is ushered in with vomiting and diarrhea. The relation of acute otitis media and acute mastoiditis to diarrhea has been discussed frequently in pediatric literature under the term of "Marriot's syndrome" (from the original description given by Marriot of St. Louis), to high temperature, dehydration and diarrhea seen in many infants suffering from acute otitis media and acute mastoiditis. There has been much argument on the part of some laboratory and hospital workers as to whether there is a true relationship between these conditions, or whether the ear and mastoid infections might be merely incidental; inasmuch as the type of bacteria found in the intestinal tract and that found in the cultures from the ear and mastoid rarely correspond. It has been noted frequently, however, when the infant with the inflamed middle ear, or acute mastoid, has had a simple myringotomy or antrotomy, that the temperature dropped and the diarrhea cleared up with recovery of the infant. Some claim this is a coincidence; but it has been observed that when these conditions were present and no operation was performed, and death occurred, at autopsy the middle ear or ears, and frequently the mastoids, were filled with pus. This has been observed so frequently that competent men feel there is some relation between the diarrhea and the pathology found at operation or autopsy. The explanation is not settled as to which is cause and which effect: whether it is a reflex condition or a result of toxin absorption. Hyperpyrexia is not always present, as the diarrhea with otitis media or acute mastoiditis may be accompanied by a low temperature, and the diarrhea clear promptly with a simple myringotomy or antrotomy.

An acute follicular tonsillitis may at times be accompanied by a diarrhea.

Dentition as a cause of infantile diarrhea must be approached cautiously. The average infant has no trouble with dentition, but occasionally this may be accompanied with excessive looseness of the bowels. Before the diarrhea should be attributed to dentition, a careful history should be taken, and then the infant should be stripped and thoroughly examined. The temperature is usually normal. Frequently no abnormalities will be discovered except the swollen gums and possibly a little redness of a tympanic membrane on the side of the erupting tooth. If the diarrhea ceases upon the eruption of the tooth, this may be considered the cause. Some infants have such sensitive nervous systems as to be easily upset by any slight irritation such as an erupting tooth, with the derangement of the digestive processes and a resultant diarrhea. Diarrhea should never be attributed

to teething until all other possible causes have been eliminated.

The above common causes are the ones most likely to be found in studying the usual diarrheas of infancy. The laboratory is an aid in study of the infections, but in the majority of cases the history and careful physical examination will usually give the cause.

* * *

CLIFFORD SWEET, M. D. (242 Moss Avenue, Oakland).—*Prognosis.* Diarrhea is a clinical sign only, and therefore cannot, alone, determine the prognosis of an illness. The frequency of the stools, their character and contents may, when considered in connection with other symptoms and signs, indicate the location, severity and, at times, the nature of the disease that is causing the illness in which diarrhea is prominent.

Diarrhea may be caused by food which has been taken in excessive quantities, and is chemically difficult of digestion (as, for example, unripe fruit) which for any reason is irritating to the digestive tract, or to which the individual patient is markedly hypersensitive (allergic). However, unless food is infected with such organisms as staphylococci, *B. enteritidis* or the typhoid group, or the food, by its irritating action within the digestive tract, produces a focus of lowered resistance through which secondary infection can invade the body locally or generally, the diarrhea produced is usually short-lived and of little consequence.

Diarrhea caused by infection, on the other hand, may be prolonged and of such severity that the patient's powers of resistance are severely taxed through loss of body fluids, essential mineral salts, blood colloids, and the depletion of the glycogen reserves of the body.

If the diarrhea is caused by infection outside the digestive tract, absorption of toxic material will continue to interfere with the function of the digestive tract until recovery has taken place either through the development of immunity, or because of the establishment of natural or surgical drainage of the focus of infection. If the infection is within the digestive tract, diarrhea will continue until recovery takes place naturally or with the assistance given by appropriate treatment. Prognosis, therefore, can be accurately and intelligently estimated only after careful, frequent examinations of the entire patient for evidence of acute upper respiratory tract infections such as pharyngitis, tonsillitis, otitis media, paranasal sinusitis or trachinitis, as well as for infections located directly within the digestive tract itself, such as colitis, typhoid and, at times, acute appendicitis.

Treatment.—The treatment of diarrhea must of course be appropriate for the disease of which it is a part. Beside this, however, the patient's nourishment and chemical balance must be constantly maintained, not only while diagnostic studies are being carried out, but also as an invaluable supplement to all other forms of treatment. The removal of irritating material from the bowel by frequent prolonged colon irrigations is valuable, not only as a means of treatment, but

also because it usually saves the small patient much discomfort by allaying the cramp-like pains so frequently complained of. Also, since these irrigations generally reduce the number of stools, the patient can sleep and rest for longer periods.

The first and most serious loss from the body of the baby with diarrhea is water. The water reserve in the small body of the infant may be rapidly reduced to a level that is dangerous; therefore an adequate water intake is the first requisite in the treatment of all patients who have diarrhea. As much water as possible should be given by mouth, and when not taken readily the amount can often be supplemented by the injection of tap water or Ringer's solution into the rectum; especially when the injection follows immediately after a thorough colon irrigation. If an abundant intake by mouth and rectum is not possible, then fluids must be injected subcutaneously or intravenously. Subcutaneous injection can always be carried out safely and easily, even in the home, either by syringe or by gravity. One or two needles can be attached to a Kelly bottle, inserted into the chest wall, strapped in place firmly with adhesive plaster over the bases of the needles and then be left in place for twenty-four hours or more. When the inflowing fluid (physiologic salt, Ringer's solution, or 4 per cent glucose solution) has made a tumor the size of the child's fist, the nurse or mother can clamp the tube and interrupt the flow of fluid until absorption has partially taken place, when the tube can be released and more be allowed to flow in. In this manner any desired amount of fluid can be given with very little discomfort to the patient. Infiltration of the skin with 1 per cent novocain solution, before inserting the hypodermic needles, and the addition of 5 to 10 cubic centimeters of the novocain solution to the first 50 to 100 cubic centimeters of the injected fluid, will reduce pain and discomfort practically to the vanishing point; thus removing opposition to a form of treatment which to the parents may at first thought seem to be too heroic.

Next in importance is the maintenance of the patient in a good state of nutrition, even though the diarrhea be a persistent one. However, the patient will remain in surprisingly good condition for many days, with little or no food intake, provided dehydration is well guarded against. Many authorities advise giving protein or lactic acid milk in full amounts despite the presence of diarrhea. The writer, however, does not agree with such advice, and has observed that in many cases the diarrhea became much less troublesome as soon as milk in all forms was withdrawn from the diet. Fruit juice in unlimited quantities is an excellent source of calories, as well as a certain method of combating acidosis. The carbohydrate of fruit juice is readily absorbed in the upper intestine, and no residue is left to act as an irritant to the lower bowel. The caloric value of fruit juice can be readily raised by the addition of glucose (Karo syrup). Besides the fruit juice, apple or pear sauce, finely ground, well-cooked cereal gruel flavored with butter and sugar, and chicken broth thickened with cereal, jelly or pureed

rice, may be added very early in the attack. This does not mean that milk should be withheld from all children who have diarrhea, but that the advisability of its use even as protein milk, lactic acid milk or, with the addition of casein albuminate, must be determined by study of the individual under care. Also, one must emphatically instruct the parents that the addition of any food to the child's diet, even during the period of convalescence, will generally cause the number of bowel movements to increase. This response to food from a digestive tract that is still irritable does not necessarily indicate that the patient has suffered a relapse. Several loose bowel movements within a period of twenty-four hours are harmless to a patient who is otherwise making favorable progress.

Glucose (10 per cent solution) in physiologic salt solution, given slowly by intravenous injection, is indicated, especially when vomiting accompanies the diarrhea, or when it is necessary to restore the glycogen reserves of the body and when, at the same time, water and chlorids are restored. If an alkalosis has developed or is suspected, the glucose should be added to Hartman's solution, ampoules of which are available on the market. Increase in blood chlorid results in the movement of base from the blood into the tissues, thus increasing tissue alkalosis if it is present.

When diarrhea is severe (as, for example, in the acute infectious type) or has been prolonged, dehydration cannot be prevented except by the addition of blood transfusion to the other forms of treatment. Even large quantities of fluid given by all available routes are quickly excreted, leaving the patient's tissues as dehydrated as ever. The blood colloids have become so depleted that they no longer have their normal water carrying function. Water literally leaks from the blood almost as rapidly as it enters. When this condition arises, the patient is in grave danger, and should be transfused at the earliest possible time. The transfusion should then be repeated as often as may be necessary, to prevent the blood again losing its water carrying function.

The time-honored methods of treating diarrhea by repeated doses of castor oil and the withholding of all food are not advisable. Castor oil sweeps the intestinal tract by its purging action, but accomplishes no more mechanically than does a thorough colon irrigation. It may have some desirable chemical action within the digestive tract, but the action is not sufficiently definite to make it of major importance. The best that can be said for it is, (1) in the absence of any contraindication, such as vomiting or possible appendicitis, it probably does no harm, and after it is given, the patient is often more content to await the carrying on of further investigation; (2) the modern manufacturer has taken away much of its disagreeable taste and odor; (3) in a few cases, where no evident cause for the diarrhea can be discovered, it appears to be of some value. The withholding of food for more than a few hours is not to be considered.

In conclusion, the treatment of diarrhea must always be the treatment of the disease of which

it is a part, and the prompt replacement of those materials which are lost from the body during its course.

* * *

DONALD K. WOODS, M. D. (2545 Fourth Avenue, San Diego).—*Treatment.* The treatment of this condition has been rather thoroughly covered, but there are a few points which possibly are worthy of emphasis.

There is no doubt that the constant replacement of fluids and mineral salts during the course of the diarrhea, regardless of its cause, should be considered the most important item in the handling of this condition.

As stated in a previous article, the cause of the diarrhea is naturally the thing to be determined, if possible, and the outlining of treatment for a condition like diarrhea is rather difficult to discuss except as it is connected with the underlying condition. The time-honored remedy, castor oil, is rarely used today by pediatricians, but in certain types of putrefactive intestinal disturbances accompanied by diarrhea, the use of an initial dose of castor oil is very valuable. This, however, should not be attempted if there is a history of inability to retain oils when taken by mouth, and it would also be inadvisable if the child is already vomiting. Castor oil is still given rather promiscuously by a great many parents and, I am sorry to say, by not a few doctors. Intestinal putrefaction, accompanied by diarrhea, however, is one of the few conditions in which I believe it is indicated in light of our present-day knowledge. The rapid sweeping out of the putrefactive material, followed by a somewhat spastic condition of the intestine, seems to be very effective in this type of case, and is one of the reasons why castor oil has continued in such great favor for a good many years. However, as with many other methods, the few successes are remembered and the failures forgotten.

Several writers, particularly in Germany, have found the use of apples and pears very helpful in diarrheal conditions. They apparently make no distinction as to the type of diarrhea in which it is most successful, but their reports are very convincing. I have personally used the raw, scraped or grated apple in rather large quantities in diarrhea cases for approximately a year, and feel certain that the use of this material is very beneficial. The apple should be given to a child of three years in amounts of from two to four tablespoonfuls each hour. The use of a small amount of karo, sugar, or banana pulp, aids in changing the taste if the child becomes dissatisfied with the apples. The apples or pears may be baked or be used as sauce. This method I have found perfectly safe and also helpful with children as young as five or six months.

It has been said by some that this treatment is entirely on an empirical basis; but those who have used it most successfully insist that the apple has a colloid action which assists in relieving the irritation in the intestines.

A certain content of malic acid exerts some beneficial action, and the bulk, food value, and

water content also play a part in relieving the condition.

The Bulgarian bacillus in different forms exerts a very helpful influence, and I believe is particularly indicated during and for a considerable time following the putrefactive types of intestinal infection accompanied by diarrhea. One of the serious results of this type of diarrhea, if prolonged, is the development of a chronic colitis. This condition may be greatly modified, I believe, by the early and prolonged use of the Bulgarian or acidophilus bacillus in different forms. These may be administered either in the form of Bulgarian or acidophilus buttermilk, or in concentrated liquid cultures.

One of the previous participants in this symposium spoke about large and rather frequent enemas, which I believe are not only valuable in removing the offending material, but there is usually a very considerable absorption of liquids from these enemas. The use of small rather concentrated starch enemas is also of value in relieving griping and irritation of the rectum, and descending colon particularly. These should be given following a thorough washing out with the water or saline enema, and an attempt should be made to have the starch retained as long as possible. There is no doubt in my mind that bismuth, given by mouth, has a valuable influence in relieving griping and distress, possibly by coating over the irritated mucous membrane.

Opium, or morphin, is valuable and should be used in sufficient dosage without hesitation, particularly with cases in which there is considerable pain and constant intestinal activity.

Boiled skimmed milk and the different forms of protein milk are well taken in many cases, and serve the purpose of replacing body fluids and at the same time adding considerable of food value to the patient. There is no doubt that in the fermentive type of diarrhea the protein milks and boiled skimmed milk exert a definite action upon the chemical condition in the intestinal tract and directly influence diarrheas of that type. Karo or sugar in small amounts may be added to these milks to improve their taste, or if there is objection to carbohydrate, saccharine makes the milk more acceptable to many children.

Diarrheas develop from various causes, but any type may be closely associated with extreme temperature during the summer months. It is very important that the little sufferers be kept as cool as possible and, where feasible, be moved to more comfortable quarters, such as a hospital, if the quarters in which they are living are not subject to heat control.

In conclusion, I wish to say that I heartily agree with the previous discussor in the statement that the treatment of diarrhea must be particularly directed at the cause, in cases where the cause can be determined. However, the original cause has frequently disappeared before the case comes to the physician, and in a very considerable number of cases we must treat the diarrhea as a clinical entity rather than a symptom.

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Leaflet Regarding Rules of Publication.—California and Western Medicine has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this journal write to its office requesting a copy of this leaflet.

EDITORIALS*

THE RIVERSIDE ANNUAL SESSION

The sixty-third annual session will convene at Riverside on Monday, April 30, and be in session through part of Thursday, May 3. The officers of the Association hope for, and look forward to, a large attendance.

The *scientific program* has been worked out with great care and topics will be discussed which are not only of great scientific, but also practical interest. The guest speakers from the East are men of established reputation, and their contributions to the program will be of real value. The scientific program and other convention information is printed on page 265 of this issue.

The activities of the Association in the field of *medical economics* will be discussed by members who have had much to do in the development of some of the present-day plans now being tried out in California—plans which are being watched not only by members of the California Medical

* Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comments column, which follows.

Association, but by state associations and other organizations interested in public health, and in medical standards and practice.

The *business* which will come before the House of Delegates will also be of importance. Delegates and alternates should aim to be present at both the Monday and Wednesday evening meetings of the House. The reports of officers and committees (printed in this issue on page 290) should be read by all delegates and alternates.

Much could be said of the *charm of Riverside*, its unique Mission Inn and its many other attractions. The local Committee of Arrangements is working hard to make the stay of every visiting member comfortable and pleasant. There will be, too, a sufficient amount of diversion to give zest to the more serious work of the scientific sections.

In addition, attention is called to the *reduced railroad fares* which were commented upon in the March CALIFORNIA AND WESTERN MEDICINE (pages 196 and 214). It is important to remember that in order to obtain the reduced rate, a certificate must be obtained from the Association Secretary prior to purchase of a reduced fare ticket.

This is the beautiful time of the year in California, and a *motor trip to Riverside*, for members who can spare the time, cannot prove other than an enjoyable experience. It is to be hoped, therefore, that many members, representing all parts of the State, will make a special effort to be in attendance at the Riverside session. Remember the dates—Monday, April 30 to Thursday, May 3. If you have not made a *hotel reservation*, it would be wise to do so. A list of the hotels is given in the official notices of the California Medical Association department, on page 303.

COMMENDABLE MEDICAL PUBLICITY—A RECENT EXAMPLE

The American College of Surgeons Meeting at Los Angeles.—The California-Nevada sectional meeting of the American College of Surgeons was held in Los Angeles on March 13 and 14. A brief outline of the program is given in the Miscellany department of this issue of CALIFORNIA AND WESTERN MEDICINE (page 315).

Reference is made thereto in order to call attention to the wonderful possibilities inherent in annual sessions of state medical societies as a means of acquainting the lay public with the aspirations, work and achievements of scientific and organized medicine.

The publicity campaign of this College of Surgeons' meeting covered an active period of about four days, although there were some brief preliminary announcements in the two or three preceding weeks. It was necessary, of course, to have publication synopses, previously and properly prepared, and to arrange facilities for releasing the same to the press representatives at the proper hours.

Agencies Used in the Recent Los Angeles Meeting.—In these recent Los Angeles meetings the mails, the pulpit, the high schools, the service

clubs, the radio stations and newspapers, were all brought into contact with the purpose of the session through visiting guest speakers and local representatives of the American College of Surgeons. The committee in charge of the publicity consisted of only two local members, who did their work with the aid of material sent out by the central Chicago office of the College. The cost in money was not great. The plans were discussed by the local committee a few months ahead, in several brief meetings, at which the details of the program and appointments for talks before clubs and over the radio were determined.

The American College of Surgeons was in session only two days; but, incidental to the scientific discussions at the meetings, some thirty different assemblies were held in nineteen high schools and junior colleges. Those talks on public health topics were given in popular language and reached an estimated audience of thirty thousand students. Speakers at service clubs and churches engaged the attention of many other hearers.

About twenty broadcasts were given over stations KFI, KECA, and KFAC, whose generous coöperation made it possible to carry the message of scientific medicine to additional thousands. On the night of the big Community Health meeting, an audience of seven thousand citizens filled the seats of the Shrine Auditorium, and the entire program, beginning at 8 p. m., was given a broadcast of one hour and a half over KECA.

The five newspapers of Los Angeles not only gave generously of space and position, but printed excellent digests of the scientific addresses. The newspaper clipping folio, covering a four-day period, reveals a total of about sixty column feet of news, copiously illustrated and dealing largely with topics on preventive medicine. This was certainly an expression of intensive publicity.

* * *

Publicity Campaigns Should Be Used More Often.—It is evident, therefore, from what has been outlined above that, in present days especially, a great service can be rendered, in the interest of the public health and scientific medicine, by carefully matured publicity campaigns, when carried on in conjunction with sessions such as those of the California-Nevada section of the American College of Surgeons, or of the annual sessions of the California Medical Association and its component county societies.

Scientific and organized medicine suffer today from overgreat and mistaken modesty in not carrying the message of their work to lay citizens. That is one of the reasons why scientific medicine is so often misunderstood, and why cultist medicine, with its deficient standards, is so frequently accepted by a large number of lay citizens. As before stated, with proper preliminary thought and diplomatic and courteous approach, amazing publicity programs could be successfully carried through in many communities of California. It is a subject worthy of the serious attention of state and county medical societies.

ANOTHER PROPOSED INITIATIVE

Legislative Sessions Bring Forth a Multitude of Anti-Public Health Measures.—Through past experience, members of the medical profession know that all kinds of weird measures, having some relationship to the public health and medical practice, will in all probability be presented at the next session of the California Legislature to be convened on January 2, 1935.

In the February CALIFORNIA AND WESTERN MEDICINE, on page 122, were printed some comments on "A Proposed Cultist Initiative Law." A perusal of the excerpts there given must have given a shock to many readers. However, if that proposed initiative seemed to contain absurdities, how will readers of CALIFORNIA AND WESTERN MEDICINE characterize quotations from another proposed initiative, a copy of which, printed below, was recently sent to the editor. The sponsors of this measure, under a real or other name, mailed their proposed law with a transmittal letter, the communication being printed on a letterhead with a San Francisco address but giving no names of officers. In this letter of transmittal it is stated:

"The enclosed proposed legislation is now in the hands of the Attorney General for summary and circulation title.

"The [name of the organization], composed of a group of public-spirited citizens, is desirous of knowing whether or not the various leaders among the public health organizations would support this type of constructive legislation.

"If it is desired on their part, we would suggest that you circulate these petitions in conjunction with your county group of the [name of the organization], to the end that this proposed measure will be successful in the November 6 election."

The foregoing language in behalf of the proposed "constructive legislation" appears innocent enough, and could be used in presenting any one of a host of meritorious measures. It is the more remarkable when the text of the proposed law is considered.

* * *

What the Proposed Initiative Would Do.—Read now some excerpts from this proposed "constructive legislation," which has the title of "Physicians' Liability Act." We reprint it, because it is important that members of the medical profession, in a consideration of modern legislation by initiative vote of the people, or as proposed in the legislative halls at Sacramento, should realize what organized and scientific medicine are at times called upon to face.

Some quotations follow:

Section 1. Any physician and/or surgeon who shall perform any unnecessary operation upon any person, or who shall sever any tissue unnecessarily, or who shall advise or prescribe any unnecessary surgical procedure or operation upon any person, shall be held to be in violation of the terms and provisions of this Act.

Section 2. All excised parts, glands, tissues or other excised matter must be kept in a carefully labeled receptacle and preserved for a period of at least ten days after the removal of the same, at the expiration of which time the same may be destroyed upon the written consent of the patient or a person related to said patient within the second degree of consanguinity, said written consent shall be effective only if obtained

after the operation. Within said period of ten days or at any other time before the written consent hereinbefore referred to is obtained, said excised material must be delivered upon written demand to the patient operated upon or his or her agent or attorney.

Section 3. If at a hearing held before the California State Medical Board it appears that the person complained against has violated the provisions of this Act, the Board shall forthwith revoke or suspend his or her certificate for license to practice medicine and/or surgery in this State. Either party to the action may ask for Writ of Review to a court of competent jurisdiction.

Section 4. For the purposes of this Act, an unnecessary operation is defined as an operation performed in which no pathology is found to exist; or an operation performed in pursuance of a wrong diagnosis; or an operation performed from which the patient could not reasonably be expected to receive the relief of symptoms upon which the operation is premised and, if in fact, after said operation patient did not receive relief from said symptoms; or an operation performed by any person who did not at the time of the performance have or use the necessary skill or training requisite to perform such operation, or was negligent in performing said operation.

For the purposes of this section a wrong diagnosis is hereby defined as a diagnosis in which the physician or surgeon arrives at a wrong conclusion respecting the nature or character of the patient's condition, as a result of overlooking or not giving due weight to symptoms which are inconsistent and in conflict with symptoms characterizing the said finding or diagnosis premising the operation.

Any person who may, or shall, be charged with, or complained of as, having performed an operation without possessing the necessary degree of skill and/or training as required by this section, shall bear the burden of proving as a matter peculiarly within the knowledge of the person so charged or complained of, that such person so charged or complained of does possess the necessary degree of skill and/or training to perform the particular type or form of operation so complained of or charged.

Section 5. Before performing any operation, a physician must first in writing diagnose the patient's condition and set forth therein the purpose of the operation; one copy of said diagnosis must be filed with the Board of Health of the county or city and county in which the operation is to be performed, before the operation is started; one copy must be filed with the hospital in which the operation is performed, if it be performed in a hospital, and one copy must be given to the patient or such person as he may designate. In the event of the necessity of an emergency operation, the delivery or filing of the above required copies of the diagnosis within twenty-four hours after the completion of the operation, or the mailing of the same to the Board of Health, hospital, and patient in person designated by the patient, within said period of twenty-four hours, shall be deemed to be a full compliance of this section.

Section 6. In any civil action any person or persons who has or have performed or assisted in acts or operations in violation of the provisions referred to and set forth in Section 4 hereof, shall be deemed to have been negligent by reason thereof, as a matter of law and such presumption of negligence shall be indisputable and conclusive. Any hospital or institution, whether charitable or otherwise, shall be liable to any patient for whom medical service of any kind or character is rendered for compensation or the agreement of patient to compensate the hospital for said service in all cases where any agent, servant or employee of said institution has performed or assisted in the performance of the acts or operations in violation of the provisions referred to and set forth in Section 4 hereof, or where said agents, servants or employees have been other-negligent, and as a proximate result of which have caused injury or damage to said patient.

Section 7. Every person who is damaged as result of a violation of this Act is entitled to recover from

the person or persons violating this Act his actual damages and a sum of Five Hundred (\$500) Dollars in addition thereto.

Section 8. All prescriptions shall be written in the English language. If a proprietary remedy, or what is known as a patent medicine, be prescribed, the prescription shall plainly state upon the face thereof the following words: "This is a patent medicine."

Section 9. Any violations of Sections 2, 4 or 6 of this Act shall be a misdemeanor and shall be punishable by imprisonment in the county jail for a period of not to exceed six months or by fine in a sum not to exceed Five Hundred (\$500) Dollars, or both. . . .

* * *

Apology for Printing the Above.—Apology is made for giving so much space to the above, but it may be desirable for members at large to have an opportunity to read such a proposed law. When the Legislature is in session, the officers of the Association—and particularly the Committee on Public Policy and Legislation—are called upon to read and study a large number (usually several hundred) measures antagonistic to the public health and scientific medicine. As a matter of fact, one of the real problems of each legislative session is to discover in the text of innocently appearing, proposed acts, the sentences and paragraphs which, if enacted into law, would become a real menace to public health standards. Only those who have followed legislation in the making can appreciate the vast amount of study and work necessary for the protection of public health interests.

* * *

Senator Swing's Address a Refreshing Contrast.—Before leaving this subject, attention is called to the paper recently read before the San Bernardino County Medical Society by Senator Ralph Swing, which is printed on page 221 of this issue. This address contains much of interest and value, and the Senator's advice on certain matters should be taken to heart by all of the medical profession. If his views were incorporated into the practice of many physicians, there would be a different story to tell than that which prevails in certain parts of California. You are urged to read what Senator Swing, who speaks as a layman, has to say to physicians and surgeons. It will be time well spent.

As for the proposed law parading under the caption, "Physicians' Liability Act," that will be watched by the representatives of the California Medical Association and other public health organizations.

ANNUAL MEETING OF CALIFORNIA'S PIONEER COUNTY MEDICAL SOCIETY

On Saturday, March 17, at the Sutter Club, the Sacramento Society for Medical Improvement held its sixty-sixth annual banquet, Dr. Robert E. Peers of Colfax acting as toastmaster and Judge Francis A. Garrecht of the United States District Court of Appeals as guest speaker, his subject being "Expert Medical Testimony."

A copy of the toast card has been received by the editor; and because of its historical interest the last page of the card is printed below.

The "Sacramento Society for Medical Improvement" is the original name of the component county unit representing Sacramento County, and because of the traditions attached, the county society has been permitted to retain the original name.

When the history of medicine in California is some day written, it will be found that the members of the medical profession who were in practice at Sacramento had a most powerful influence in the development of scientific and of organized medicine in the State. For instance, it was the foresight of members of the profession of that city that made it possible for the State of California, in its early days as a commonwealth, to have one of the first State Boards of Health in the United States.

The brief summary of achievements of some of our former Sacramento colleagues, as printed on the menu card, follows:

SOME SACRAMENTO MEDICAL HISTORY

1. The first medical society in the West was organized May 5, 1850. It soon passed out of existence. Two or three other attempts were made to establish a permanent organization. Our present society was established March 17, 1868. It is sixty-five years old tonight.

2. During the cholera epidemic in 1850, Sacramento lost by death about eight hundred of its residents. Seventeen physicians gave their lives in this epidemic.

3. The first City Board of Health in the United States was organized in Boston. The second in Sacramento, March 22, 1862.

4. The first successful appendix operation in the West was performed by Dr. Thomas Huntington of Sacramento.

5. One of the earliest splenectomies in the West was performed by Dr. G. L. Simmons.

6. The first surgical electromagnet in Sacramento was brought here by Dr. W. E. Briggs. In 1881 Doctor Briggs removed a piece of steel from a human eye. The first on the Pacific Coast.

7. The first static x-ray machine in Sacramento was brought here by Dr. F. G. Fay.

8. The first Coolidge x-ray tube was brought to Sacramento and used by Dr. Wallace A. Briggs.

9. The first prophylactic diphtheria antitoxin given in America was given by Dr. A. M. Henderson of Sacramento.

10. The first railroad hospital in the world was built in Sacramento.

11. Sacramento gave two doctors to the Spanish-American War—Drs. W. J. Hanna and G. Parker Dillon.

12. Sacramento has given four presidents to the State Medical Society—Drs. Ross, Huntington, Parkinson, and Junius B. Harris.

13. The Sisters Hospital acquired the Ridge Home, 1895.

14. The Sutter Hospital opened December 3, 1923.

15. The new Sisters Hospital opened February 11, 1925.

16. About twenty-five Sacramento doctors served in the World War.

17. Dr. Louis H. Braafladt originated the Kaolin treatment of cholera in the Orient. His work brought him international fame. He passed away in Sacramento in 1933.

"The skill of the Physician shall lift up his head, and in the sight of great men he shall be praised."

Ecclesiasticus

THE ALAMEDA HEALTH INSURANCE EXPOSÉ

After the copy for the April CALIFORNIA AND WESTERN MEDICINE had been sent to the printer, the editor received, through the courtesy of Dr. Charles B. Pinkham, Secretary of the Board of Medical Examiners of the State of California, a file of newspaper clippings on the exposé of certain "health insurance" organizations in Alameda County, as instituted by the Grand Jury and District Attorney Earl Warren of that county. Mention was made of the revelations in the March CALIFORNIA AND WESTERN MEDICINE, pages 196 and 215.

The activities of some of these nefarious "health insurance" organizations have long been a stench in the nostrils of honest citizens, and it is pleasing to know that at last one or two state insurance and corporation laws are to be put into force in an effort to stop the fleecing of innocent citizens by some of these grafting organizations. Reputable hospitals operating strictly as such are not involved, and any such hospitals desiring to furnish hospitalization on a periodic or premium payment basis will necessarily be required to conform to the ruling of the Attorney General.

In the meantime the department of the State Insurance Commissioner and the district attorneys of the different counties, especially those which include the larger cities of California—where most of the off-color "health insurance" organizations thrive—may well make surveys of local conditions. The Board of Medical Examiners of the State of California will render all possible aid. Every county medical society should instruct its officers and proper committees to make a study and report on local conditions, sending copies of such reports to the central office of the Association and to the Board of Medical Examiners. Such coöperation will be appreciated.

Readers of CALIFORNIA AND WESTERN MEDICINE who wish—because of its relation to important medico-economic and social forces—to learn more of what recently took place in Alameda and San Francisco counties, are referred to the Miscellany department of this issue, where several newspaper clippings of recent proceedings are reprinted. (See page 317).

STATE HOSPITALIZATION

Something by a Different Name.—The Bakersfield *Californian* recently printed an item concerning an address which Supervisor Abel of Kern County is scheduled to deliver at the May meeting of the State Supervisorial Association. Members of the California Medical Association are somewhat familiar with the unrest that, for several years, has existed in Kern County circles because of some of the activities and procedures which have been carried on at the Kern County Hospital. The news item reprinted below, therefore, may be worthy of perusal. The manner in which Supervisor Abel develops his thesis at the May meeting of the county supervisors of California should also be of interest.

Item follows:

SUPERVISOR TO SPEAK ON HOSPITAL POLICIES

Supervisor Stanley Abel, Secretary of the State Supervisorial Association, has been asked to address the state supervisors' convention at Santa Cruz in May on the subject of "State Hospitalization."

Supervisor Abel said here he will take the stand in his address that patients needing operations, those who are ill and in need of medical attention, should be required to pay on a basis of their ability to pay and not on a basis of arbitrary costs.

He said further he will take the stand that county and state hospitals should be available to everyone, and their facilities should not be withheld and limited to a restricted class. He declared he was opposed in principle to state medicine, believing every man should have a right to select his own doctor, but favored state hospitalization in which hospital facilities would be made available to everyone on a basis of ability to pay.

EDITORIAL COMMENT*

SYMPTOM-FREE JENNERIAN VACCINATION

The substitution of test-tube virus for routine calf lymph in smallpox vaccination is currently advocated by Doctors Rivers and Ward¹ of the Rockefeller Institute. Their "cultivation virus" is free from bacterial contamination, can be used without the addition of chemical antiseptics, and allegedly causes such mild local and systemic reactions as to remove many of the popular objections to vaccination. Moreover, test-tube vaccinia is apparently qualitatively identical with the Board of Health virus.

Artificial cultivation of vaccinia was first accomplished, about twenty years ago, by Doctors Steinhardt, Israeli, and Lambert,² of New York City, who found that this filterable agent multiplies (or is multiplied) in the presence of viable tissue fragments suspended in homologous plasma. This discovery was of main interest, at the time, in throwing light on the probable nature of this ultramicroscopic infectious unit. It suggested, for example, that the infectious particle is probably not a fully autonomous microbic cell, but should be likened to a pathogenic enzyme or infectious hormone capable of symbiotic proliferating with the aid of viable histological units.

The Steinhardt cover-glass technique was afterward modified so as to make possible large scale cultivation of this virus. In the final technique thus far developed by the New York investigators, minced chick embryo suspended in Tyrode's solution is the routine culture medium. If transfers to fresh flasks of embryonic tissue suspension are made at intervals of four to five days, the virus can be propagated indefinitely. A gradual reduc-

tion in its anti-rabbit virulence, however, is noted in successive transplants, the infectious agent becoming practically avirulent by the ninetieth serial transfer. At any stage of this deterioration, however, the virus can be restored to its original anti-rabbit virulence by testicular inoculation.

With various artificial cultures of this type, including virulent, practically avirulent and "revived" strains, over a hundred children thus far have been vaccinated by the New York investigators, 90 per cent of whom gave positive local pustular reactions. The local reactions, however, were invariably milder than those caused by the routine calf-lymph virus. The children had no fever, and no other recognizable toxic or allergic symptoms.

The prophylactic value of the Rivers-Ward cultivation virus is deduced from the fact that all children successfully vaccinated with this virus, who were subsequently tested with the Board of Health calf lymph, were found to be refractory to routine vaccination. Conversely, individuals previously vaccinated with the Board of Health virus gave negative results on attempted revaccination with Rivers-Ward virus. The only differences between the two viruses, therefore, are apparently quantitative in nature.

In spite of these encouraging results, however, the clinical profession will be reluctant to test the suggested substitution. A more feasible suggestion would be to use the Rivers-Ward vaccine as a preliminary immunizing agent, to be followed in all cases and preferably about a month later by routine calf-lymph inoculation. The predicted probability is that 80 per cent of these revaccinations would not "take." The 20 per cent that did take, presumably would give unusually mild local and systemic reactions.

Stanford University.

W. H. MANWARING,
Palo Alto.

AMEBIC DYSENTERY

Wide publicity has been given to an outbreak of amebic dysentery in Chicago, originating presumably in an unusual number of carriers among the food-handling personnel of two hotels. The interest, not to say anxiety, that has been created, and the feverish activity that has resulted in many diagnostic laboratories invite comment on the general question of amebic infections, with especial reference to the possibilities of similar trouble in other communities.

In Chicago amebic cases and amebic carriers were found during August among the food-handling personnel of two certain hotels, in one of which two cases of amebic dysentery had been reported on August 16. It was learned later, in November, that a break in a sewer had occurred on July 2, flooding basements and ice storage rooms. It is apparent, however, that no pollution of the water supply could have occurred at this time, as no cases of diarrhea or dysentery were reported until six weeks later, when two cases of amebic dysentery were found. The theory that amebiasis resulted from the sewer break in July

* This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

¹ Rivers, T. M., and Ward, S. M.: *J. Exper. Med.*, 58:635 (Nov.), 1933.

² Steinhardt, E., Israeli, C., and Lambert, R. A.: *J. Infect. Dis.*, 13:294, 1913.

seems untenable, for the reason that the usual crop of cases of nausea, vomiting and diarrhea that accompanies a sudden pollution of a water supply did not occur; and it is inconceivable that amebic cysts could enter the water supply in sufficient numbers to establish new infections without the occurrence of these toxic symptoms, as well as the development of subsequent cases of typhoid. The discovery, later, of bad plumbing conditions with cross connections and every opportunity for pollution is likewise not to be considered for the same reason, although the lesson should be drawn that cross connections between water supplies and sewer systems exist in many of our larger cities, where the plumbing is sometimes in a deplorable state of repair, as well as in conflict with the laws of sanitation in its engineering. Bacillary dysentery and typhoid may, therefore, be expected from time to time from such a cause.

It is not believed that there is ground to fear an epidemic of amebic dysentery in other communities, for the reason that special conditions must have existed in Chicago that are not likely to be repeated elsewhere. The fact of the matter is that persons harboring the *Endameba histolytica* are fairly numerous in the population, and the condition is properly spoken of as amebiasis; the term "amebic dysentery" being reserved for the acute form accompanied by diarrheal stools. New infections have their origin in the ingestion of cysts that are excreted during the chronic and latent types of infections, the acute stage shedding motile amebas not being a factor in the spread for the reason that the motile stage is very short lived outside the body.

The danger of an increased incidence in various parts of the country by reason of the travel of people from a Chicago focus is not regarded as serious. This would not be in accordance with the known character of amebic infections as being of slow and insidious development, and not at all prone to occur epidemically. While food handlers are the source of new infections, there is every reason to believe that casual and transitory exposure is not ordinarily sufficient, but that continued association, as within the family, provides the best opportunity for the establishment of new infections.

The extent to which amebiasis exists in this country has not been generally appreciated. Surveys by various investigators have shown that carriers are everywhere, the percentage sometimes being as high as 10 per cent of those examined. It seems entirely logical to assume that not all of these carriers are escaping injury from their association with the parasite, and many obscure medical conditions are doubtless due to complications in which the *Endameba histolytica* plays a part. The matter is, therefore, of considerable public health importance, and physicians should be prepared to extend their investigation of obscure cases into this field. The reporting of these cases by physicians should become more general, to the end that additional knowledge can be accumu-

lated by public health authorities concerning the epidemiology of the infection; and the regulations of the State Board of Public Health should be changed to require the reporting of amebiasis as distinguished from acute cases of amebic dysentery.

Bureau of Laboratories,
California State Board of Health.

W. H. KELLOGG,
Berkeley.

SEXUAL MATURITY AND GROWTH*

It is now generally held that the sex hormones of the anterior pituitary are antagonistic to the growth hormone. The purpose of the present study is to test the validity of this assumption by determining what influence early puberty may have on skeletal growth.

The age of onset of menstruation was obtained, and measurements of the height were taken in a series of 613 patients admitted to the women's clinic. All of these patients were adult white women; the majority of them were American-born. The series of cases was divided into three groups, according to the age of onset of menstruation. The results obtained were as follows:

Group 1. Onset of menstruation at eleven years or under. One hundred and ninety-two consecutive cases. Average height 62.45 inches.

Group 2. Onset of menstruation at thirteen or fourteen years. Two hundred and thirty unselected, but not consecutive cases. Average height 63.18 inches.

Group 3. Onset of menstruation at sixteen years or over. One hundred and ninety-one consecutive cases. Average height 62.87 inches.

The simplest interpretation of the data presented is that early puberty has little, if any, effect on subsequent skeletal growth. It follows, therefore, that the sex hormones are not necessarily antagonistic to the activity of the growth hormone.

1009 Medico-Dental Building.

SAMUEL HANSON,
Stockton.

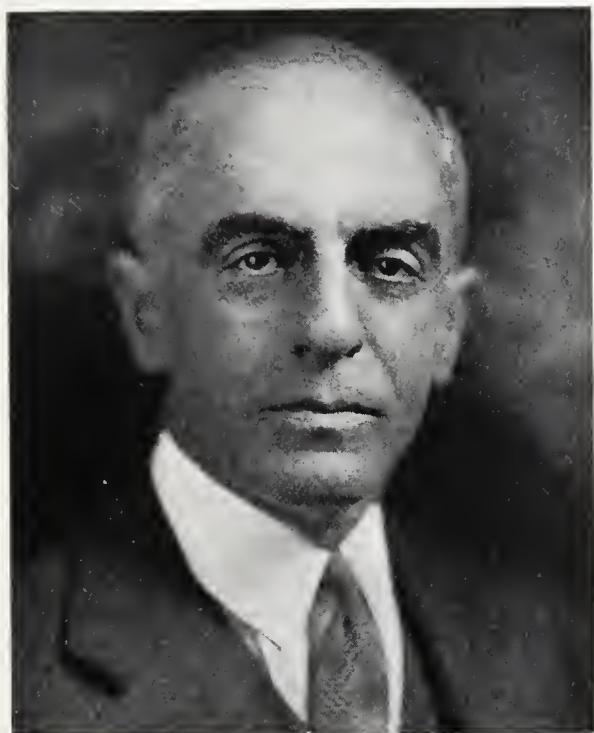
* From the San Joaquin General Hospital.

There are men and classes of men that stand above the common herd; the soldier, the sailor, and the shepherd not infrequently; the artist rarely; rarelier still, the clergyman; the physician almost as a rule. He is the flower (such as it is) of our civilization; and when that stage of man is done with, and only remembered to be marveled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited in the virtues of the race. Generosity he has, such as is possible to those who practice an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in a thousand embarrassments; and what are more important, Herculean cheerfulness and courage. So it is that he brings air and cheer into the sickroom, and often enough, though not so often as he wishes, brings healing.—Robert Louis Stevenson.

Rodent Control in Oakland.—Through the provision of CWA funds, eight men are engaged in rodent control work in Oakland. A large group of men is also engaged similarly in rodent control work at Stockton. The provision of CWA funds has made possible a large amount of essential public health work that otherwise might not have been accomplished.

GUEST SPEAKERS AT THE SIXTY-THIRD ANNUAL SESSION CALIFORNIA MEDICAL ASSOCIATION

Speakers at General Meetings



RUSSELL L. CECIL
Assistant Professor of Medicine,
Cornell University,
New York



IRVINE McQUARRIE
Professor of Pediatrics,
University of Minnesota,
Minneapolis



ALFRED KIMBALL HAYWOOD
Superintendent, Vancouver General Hospital,
Vancouver, British Columbia

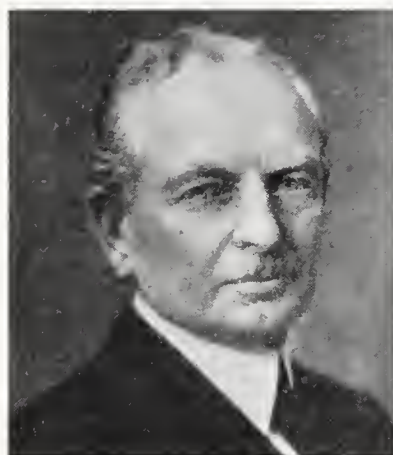


CHESTER ROWELL
Editor, San Francisco Chronicle
San Francisco



CLARENCE G. TOLAND
President-Elect

SECTION OFFICERS



JOHN MILLER WILSON
Chairman, Anesthesiology



LOUIS F. X. WILHELM
Chairman, Dermatology and
Syphilology



J. ROY JONES
Chairman, Eye, Ear, Nose, and
Throat



PHILIP K. ALLEN
Secretary, Dermatology and
Syphilology



SAMUEL A. DURR
Secretary, Eye, Ear, Nose, and
Throat

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and Surgery Section



HILMAR O. KOEFOD
Secretary, General Medicine



EDWIN M. TAYLOR
Secretary, General Surgery



J. MINTON MEHERIN
Secretary, Industrial Medicine
and Surgery



CLIFFORD W. MACK
Chairman, Neuropsychiatry



ALICE F. MAXWELL
Chairman, Obstetrics and
Gynecology



GEORGE D. MANER
Chairman, Pathology and
Bacteriology

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H. DOUGLAS EATON
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Secretary, Obstetrics and
Gynecology



EMIL BOGEN
Secretary, Pathology and
Bacteriology



FRANCIS S. SMYTH
Chairman, Pediatrics



ROBERT S. STONE
Chairman, Radiology



LEWIS MICHELSON
Chairman, Urology



HENRY E. STAFFORD
Secretary, Pediatrics



KENNETH S. DAVIS
Secretary, Radiology



GEORGE F. SCHENCK
Secretary, Urology

PROGRAM

THE SIXTY-THIRD ANNUAL SESSION of the CALIFORNIA MEDICAL ASSOCIATION

TO BE HELD AT

MISSION INN, RIVERSIDE

APRIL 30 TO MAY 3, 1934

OFFICERS AND COMMITTEES, 1934

GENERAL OFFICERS

GEORGE G. REINLE, Oakland, President
CLARENCE G. TOLAND, Los Angeles, President-Elect
EDWARD M. PALLETTE, Los Angeles, Speaker of House of Delegates
JOHN H. GRAVES, San Francisco, Vice-Speaker of House of Delegates
EMMA W. POPE, San Francisco, Secretary-Treasurer
GEORGE H. KRESS, Los Angeles, Editor
HARTLEY F. PEART, San Francisco, General Counsel
HUBERT T. MORROW, Los Angeles, Associate General Counsel

COUNCILORS

First District

W. W. Roblee, Riverside (1935)
Imperial, Orange, Riverside, and San Diego Counties

Second District

Carl R. Howson, Los Angeles (1936)
Los Angeles County

Third District

Henry J. Ullmann, Santa Barbara (1934)
Kern, San Bernardino, San Luis Obispo, Santa Barbara,
and Ventura Counties

Fourth District

Fred R. De Lappe, Modesto (1935)
Calaveras, Fresno, Inyo, Kings, Madera, Mariposa,
Merced, Mono, San Joaquin, Stanislaus, Tulare,
and Tuolumne Counties

Fifth District

Alfred L. Phillips, Santa Cruz (1936)
Monterey, San Benito, San Mateo, Santa Clara,
and Santa Cruz Counties

Sixth District

Karl L. Schaupp, San Francisco (1934)
San Francisco County

Seventh District

Oliver D. Hamlin, Oakland (1935)
Alameda and Contra Costa Counties

Eighth District

C. E. Schoff, Sacramento (1936)
Alpine, Amador, Butte, Colusa, El Dorado, Glenn, Lassen,
Modoc, Nevada, Placer, Plumas, Sacramento, Shasta,
Sierra, Sutter, Tehama, Yolo, and Yuba Counties

Ninth District

Henry S. Rogers, Petaluma (1934)
Del Norte, Humboldt, Lake, Marin, Mendocino, Napa,
Siskiyou, Solano, Sonoma, and Trinity Counties

Councilors-at-Large

Junius B. Harris, Sacramento (1934)
Harry H. Wilson, Los Angeles (1935)
C. O. Tanner, San Diego (1936)
William H. Kiger, Los Angeles (1934)
Morton R. Gibbons, San Francisco (1935)
T. Henshaw Kelly, San Francisco (1936)

DELEGATES AND ALTERNATES TO A. M. A.

Delegates	Sessions	Alternates
Elbridge Best San Francisco	(1934-1935)	Robert S. Stone San Francisco
Lyell C. Kinney San Diego	(1934-1935)	Harry H. Wilson Los Angeles
Fred B. Clarke Long Beach	(1934-1935)	A. J. Scott Los Angeles
C. A. Dukes Oakland	(1934)	Edward N. Ewer Oakland
Carl R. Howson Los Angeles	(1934)	Edward M. Pallette Los Angeles
Junius B. Harris Sacramento	(1934)	John H. Shephard San Jose
William R. Molony Sr. Los Angeles	(1934)	John C. Ruddock Los Angeles

STANDING COMMITTEES

Executive Committee

The President, the President-Elect, the Speaker of the House of Delegates, the Chairman of the Council, the Secretary-Treasurer, the Editor, and the Chairman of the Auditing Committee, the Chairman of the Committee on Public Relations. (Committee Chairman, Karl L. Schaupp; Secretary, Emma W. Pope.)

Auditing Committee

Karl L. Schaupp (Chairman).....San Francisco
O. D. Hamlin.....Oakland
Morton R. Gibbons.....San Francisco

Committee on Associated Societies and Technical Groups

R. Manning Clarke (Chairman), Los Angeles.....1934
Clifford Sweet, Oakland.....1935
William H. Geistweit, San Diego.....1936

Committee on Extension Lectures

Robert T. Legge (Chairman), Berkeley.....1934
James F. Churchill, San Diego.....1935
J. Homer Woolsey, San Francisco.....1936
The Secretary Ex officio

Committee on Health and Public Instruction

Langley Porter, San Francisco.....1934
Fred B. Clarke (Chairman), Long Beach.....1935
W. R. P. Clark, San Francisco.....1936

Committee on History and Obituaries

George D. Lyman, San Francisco.....1934
Charles D. Ball (Chairman), Santa Ana.....1935
J. Marion Read, San Francisco.....1936
The Secretary Ex officio
The Editor.....Ex officio

Committee on Hospitals, Dispensaries, and Clinics

Karl L. Schaupp, San Francisco.....1934
John C. Ruddock, Los Angeles.....1935
Daniel Crosby (Chairman), Oakland.....1936

Committee on Industrial Practice

Harry E. Zaiser, Orange.....1934
Morton R. Gibbons (Chairman), San Francisco.....1935
Mott H. Arnold, San Diego.....1936

Committee on Medical Defense

Henry Snure, Sr. (Chairman), Los Angeles.....1934
George G. Reinle, Oakland.....1935
Fred R. De Lappe, Modesto.....1936

Committee on Medical Economics

Willard Stone, Pasadena.....	1934
John H. Graves (Chairman), San Francisco.....	1935
William R. Molony, Sr., Los Angeles.....	1936

Committee on Medical Education and Medical Institutions

H. A. L. Ryfkogel, San Francisco.....	1934
George Dock (Chairman), Pasadena.....	1935
*George G. Hunter, Los Angeles.....	1936

Committee on Membership and Organization

LeRoy Brooks, San Francisco.....	1934
Harry H. Wilson (Chairman), Los Angeles.....	1935
Dewey R. Powell, Stockton.....	1936
The Secretary.....	Ex officio

Committee on Publications

Percy T. Magan (Chairman), Los Angeles.....	1934
Ruggles A. Cushman, Talmage.....	1935
Frederick F. Gundrum, Sacramento.....	1936
The Secretary.....	Ex officio
The Editor.....	Ex officio

Committee on Public Policy and Legislation

E. T. Remmen, Glendale.....	1934
Junius B. Harris (Chairman), Sacramento.....	1935
Fred R. De Lappe, Modesto.....	1936
The President.....	Ex officio
The President-Elect.....	Ex officio

Committee on Scientific Work

Lemuel P. Adams, Oakland.....	1934
J. Homer Woolsey, San Francisco.....	1935
F. M. Pottenger, Monrovia.....	1936
H. O. Koefod, Secretary of Section on General Medicine.....	Ex officio
Edwin M. Taylor, Secretary of Section on General Surgery.....	Ex officio
Emma W. Pope (Chairman).....	Ex officio

Committee on Public Relations

The Committee on Public Relations consists of the chairmen of the following standing committees and of certain general officers of the Association, who serve ex officio. The chairman of the committee is Dr. Charles A. Dukes, the secretary is Dr. Emma W. Pope. The director of the Department of Public Relations is Dr. Walter M. Dickie.

* Deceased.

Fred B. Clarke, Chairman, Committee on Health and Public Instruction.

Daniel Crosby, Chairman, Committee on Hospitals, Dispensaries, Clinics.

Morton R. Gibbons, Chairman, Committee on Industrial Practice.

Harry H. Wilson, Chairman, Committee on Membership and Organization.

John H. Graves, Chairman, Committee on Medical Economics.

Junius B. Harris, Chairman, Committee on Public Policy and Legislation.

Charles A. Dukes, Chairman, Cancer Commission.

George G. Reinle, President of the California Medical Association.

Clarence G. Toland, President-Elect.

Emma W. Pope, Secretary-Treasurer.

Communications for the Public Relations Department should be addressed to the director, Dr. Walter M. Dickie, Room 2008, Four Fifty Sutter Street, San Francisco.

Cancer Commission

Charles A. Dukes (Chairman), Oakland.....	1934
Lyell C. Kinney (Vice-Chairman), San Diego.....	1934
Alson R. Kilgore (Secretary), San Francisco.....	1934
Orville Meland (Secretary for Southern Section), Los Angeles.....	1935
A. Herman Zeiler, Los Angeles.....	1935
Gertrude Moore, Oakland.....	1935
Harold Brunn, San Francisco.....	1936
Henry J. Ullmann, Santa Barbara.....	1936
Clarence G. Toland, Los Angeles.....	1936

Communications for the Cancer Commission should be addressed to the secretary, A. R. Kilgore, M. D., Room 2008, 450 Sutter Street, San Francisco.

SPECIAL COMMITTEES**Committee on Arrangements—Riverside Annual Session**

William W. Roblee (Chairman), Riverside.
Hervey S. Faris, Riverside.
G. Wayland Coon, Riverside.
Bon O. Adams, Riverside.
Arthur W. Walker, Riverside.
Thomas A. Card, Riverside.

Subcommittee on Clinics

Wayland Coon, Riverside
Ray B. McCarty, Riverside

REGISTRATION INFORMATION

Registration and Information.—The registration and information desk is located in the lobby, Mission Inn. All persons attending the convention, whether members or not, are requested to register immediately on arrival. Beginning Monday, April 30, registration secretaries will be on duty daily from 9 a. m. until 5 p. m.

Programs and "Pre-Convention Bulletin."—The registration clerks will give to every member a copy of the program. The "Pre-Convention Bulletin" is printed in this issue of CALIFORNIA AND WESTERN MEDICINE. Delegates and alternates are especially requested to read the reports of officers and committees.

Membership Cards.—Every member in good standing in the California Medical Association has been issued an official membership card for 1934. Membership cards must be shown at the registration desk.

Guests and Visitors.—All guests and visitors are requested to register. All general meetings and scientific meetings are open to visitors and guests.

Badges.—Four kinds of badges will be issued by the registration bureau:

1. **Members.**—Only active, associate, retired or honorary members of the California Medical Association will be issued the usual membership badge. Members must show membership cards when they register.

2. **Guests.**—A guest badge will be issued to all fraternal delegates, visiting physicians, wives of members, and technical specialists who are attending the 1934 session.

3. **Delegates and Alternates.**—The usual official badge for each delegate and alternate is provided for this purpose, and will be issued only to one authorized to wear it.

4. **Officers.**—An official badge is provided for all officers and members of the Council.

Suggestions and Constructive Criticism.—The officers and committees have tried to do everything possible to make the session a success. Suggestions and constructive criticism calculated to make future sessions more useful will be welcomed by any of the officers. Complaints of whatever character should be promptly made to the registration desk, where they will receive attention.

DINNERS AND LUNCHEONS

See Bulletin Boards for Other Announcements

Official Dinners and Luncheons

President's Dinner.—Tuesday evening, 7 p. m., in main dining room, Mission Inn. Entertainment in the auditorium follows the dinner. Tickets \$2 to members staying at other hotels than Mission Inn. There will be no charge to guests at Mission Inn.

State and County Officers' Luncheon.—All county officers, and officers, councilors and standing committeemen of the California Medical Association are invited to a luncheon on Tuesday, May 1, at 1 p. m., in the Spanish Arcade.

Committee on Scientific Work.—The Committee on Scientific Work will meet at luncheon on Wednesday, May 2, in the Spanish Arcade.

MEMBERSHIP, 31st ANNUAL SESSION OF HOUSE OF DELEGATES

DELEGATES—EX OFFICIO (21)	
George G. Rehnle, Oakland.....	President
Clarence G. Toland, Los Angeles.....	President-Elect
Emma W. Pope, San Francisco.....	Secretary-Treasurer
Edward M. Pallette, Los Angeles.....	
Speaker of the House of Delegates	
John H. Graves, San Francisco.....	
Vice-Speaker of the House of Delegates	
George H. Kress, Los Angeles.....	Editor
W. W. Roblee, Riverside (1935).....	Councilor 1st District
Carl R. Howson, Los Angeles (1936).....	Councilor 2nd District
Henry J. Ullmann, Santa Barbara (1934).....	
Councilor 3rd District	
Fred R. DeLappe, Modesto (1935).....	Councilor 4th District
Alfred L. Phillips, Santa Cruz (1936).....	Councilor 5th District
Karl L. Schaupp, San Francisco (1934).....	
Councilor 6th District	
Oliver D. Hamlin, Oakland (1935).....	Councilor 7th District
C. E. Schoff, Sacramento (1936).....	Councilor 8th District
Henry S. Rogers, Petaluma (1934).....	Councilor 9th District
Harry H. Wilson, Los Angeles (1935).....	Councilor-at-Large
C. O. Tanner, San Diego (1936).....	Councilor-at-Large
William H. Kiger, Los Angeles (1934).....	Councilor-at-Large
Morton R. Gibbons, San Francisco (1935).....	
Councilor-at-Large	
T. Henshaw Kelly, San Francisco (1936).....	
Councilor-at-Large	
Junius B. Harris, Sacramento (1934).....	Councilor-at-Large

ELECTED DELEGATES (115)	
Delegates	Alternates
Alameda County (9)	
Lemuel P. Adams	V. G. Alderson
N. Austin Cary	C. B. Bowen
C. A. Dukes	John A. Dougherty
Edward N. Ewer	John N. Ewer
Robert A. Glenn	William F. Holcomb
T. C. Lawson	Eric Liljencrantz
Frank R. Makinson	E. A. Majors
Albert M. Meads	George McClure
William H. Sargent	Hobart Rogers
Butte County (1)	
Dan H. Moulton	W. H. Barnes
Contra Costa County (1)	
U. S. Abbott	S. N. Weil
Fresno County (3)	
George W. Walker	Edwin R. Scarboro
George H. Sciaroni	Kenneth J. Staniford
Thomas F. Madden	Roland W. Dahlgren
Humboldt County (1)	
Orris R. Myers	Lane Falk
Imperial County (1)	
John L. Parker	George C. Holleran
Kern County (1)	
L. A. Packard	William H. Moore
Kings County (1)	
C. G. Newbecker	
Lassen-Plumas County (1)	
Fred J. Davis	George S. Martin
Los Angeles County (36)	
Peter H. Blong	Walter A. Bayley
John H. Breyer	O. W. Butler
Harry V. Brown	Egerton Crispin
E. M. Burns	John W. Crossan
R. Manning Clarke	Philip S. Doane
Joseph F. Shuman	Newton Evans
George Dock	Elizabeth Mason Hohl
John Dunlop	William W. Hutchinson
Scott D. Gleeten	Samuel S. Mathews
Orrie E. Ghrist	H.G. McNeil
Lowell S. Goin	Lyle G. McNeile
J. M. Klein	James F. Percy
George D. Maner	F. M. Pottenger
Robert E. Ramsay	Eleanor Seymour
John C. Ruddock	F. C. Swearingen
A. J. Scott	Hiram B. Tebbetts
Leroy B. Sherry	Walter Wessels
Henry Snure	A. H. Zeiler
C. Max Anderson	1 1 1
Joseph T. Axline	Eliot Alden
Wilford M. Briggs	L. A. Alesen
W. H. Bucher	John V. Barrow
Fred B. Clarke	Martin G. Carter
Jay J. Crane	William H. Daniel
Dean E. Godwin	Kenneth S. Davis
Leo J. Madsen	William Duffield
W. C. McKee	John D. Gillis
William R. Molony, Sr.	Walter L. Huggins
E. Earl Moody	E. Eric Larson
John P. Nuttall	Percy T. Magan
Oscar Reiss	W. S. Mortensen
Philip Stephens	Thomas C. Myers
Charles T. Sturgeon	William H. Olds
Joseph K. Swindt	John W. Shuman
W. T. Webber	Harry J. Wiley
Robert W. Wilcox	R. G. Taylor
	Packard Thurber
Marin County (1)	
Homer E. Marston	J. H. Kuser

Delegates	Alternates
Mendocino County (1)	
R. A. Cushman	
Merced County (1)	
A. S. Parker	B. E. McDowell
Monterey County (1)	
Mast Wolfsohn	James H. McPharlin
Napa County (1)	
Allan K. McGrath	George I. Dawson
Orange County (3)	
D. R. Ball	G. W. Olson
John I. Clark	Harry G. Huffman
J. Luther Maroon	R. P. Yeagle
Placer County (1)	
W. M. Miller	Robert A. Peers
Riverside County (2)	
G. Wayland Coon	Hervey S. Faris
Thomas A. Card	Erwin P. Miller
Sacramento County (3)	
George Briggs	Paul Christman
Nathan G. Hale	Leo W. Farrell
Frederick N. Scatena	H. M. Kanner
San Benito County (1)	
Emma E. McKay	J. M. O'Donnell
San Bernardino County (3)	
F. B. Moor	E. H. Hull
A. T. Gage	F. F. Abbott
C. F. Whitmer	H. G. Gentry
San Diego County (5)	
W. H. Barrow	George D. Huff
W. H. Geistweit, Jr.	R. M. Ledford
W. L. Garth	Ross S. Carter
Hall G. Holder	Andrew J. Thornton
S. J. McClendon	Clair L. Stealy
San Francisco County (16)	
Philip H. Arnot	Elbridge J. Best
Zera E. Bolin	Leroy Brooks
Edwin L. Bruck	G. D. Delprat
Harold Brunn	Emile Holman
Loren R. Chandler	George N. Hosford
L. H. Garland	William J. Kerr
Philip K. Gilman	John J. Loutzenheiser
Irving S. Ingber	Thomas H. McGavack
Alson R. Kilgore	Merrill C. Mensor
Langley Porter	James W. Morgan
George K. Rhodes	George Warren Pierce
Emmet Rixford	Philip H. Pierson
Wilber F. Swett	Robert S. Stone
I. W. Thorne	Edward B. Towne
Hans von Geldern	Morrell E. Vecki
Rodney A. Yoell	William C. Voorsanger
San Joaquin County (2)	
Dewey R. Powell	J. F. Doughty
George H. Sanderson	C. A. Broadus
San Luis Obispo County (1)	
G. L. Sobey	W. D. Butler
San Mateo County (1)	
H. H. Ray	Edward Ziegelman
Santa Barbara County (2)	
Hugh Freidell	W. E. Johnson
Richard Evans	E. J. Lamb
Santa Clara County (4)	
C. Kelly Canelo	James P. Lovely
Alson A. Shufelt	Edward Liston
R. Stanley Kneeshaw	Samuel B. Van Dalsem
Russell V. Lee	John Hunt Shephard
Santa Cruz County (1)	
J. T. Harrington	W. E. Fehliman
Shasta County (1)	
M. D. Pratt	Ernest Dozier
Siskiyou County (1)	
Joseph Langer	C. C. Dickinson
Solano County (1)	
P. B. Fry	C. A. Snoddy
Sonoma County (1)	
F. O. Butler	Mark L. Lewis
Stanislaus County (1)	
R. S. Hiatt	
Tehama County (1)	
F. L. Doane	R. G. Frey
Tulare County (1)	
Frank Kohn	Donald C. Fowler
Ventura County (1)	
W. S. Clark	Fred A. Shore
Yolo-Colusa-Glenn County (1)	
Charles A. Poage	Charles S. Roller
Yuba-Sutter County (1)	
P. B. Hoffman	John A. Duncan

I—GENERAL MEETINGS*

All General Meetings will be held in Convention Hall, Municipal Auditorium

FIRST GENERAL MEETING

Monday, April 30, 10 a. m.

GEORGE G. REINLE, M. D., *President*,
Presiding Officer

1. *Invocation*—Reverend Ezra James Egly, Pastor Calvary Presbyterian Church, Riverside.
2. *Address*—Mayor Eugene B. Criddle, Riverside.
3. *Address of Welcome*—George Wayland Coon, M. D., President, Riverside County Medical Society, Riverside.
4. *Address*—George G. Reinle, M. D., President, California Medical Association.
5. *Address*—Chester Rowell, LL.D., Editor, San Francisco Chronicle, San Francisco.
6. *Voluntary Canadian Plans—Studies and Developments*—Alfred K. Haywood, M. D., Superintendent, Vancouver General Hospital, Vancouver, British Columbia.

✽

SECOND GENERAL MEETING

Tuesday, May 1, 11 a. m.

CLARENCE G. TOLAND, M. D., *President-Elect*,
Presiding Officer

1. *The Modern Aspects of Focal Infection*—Russell L. Cecil, M. D., Cornell University, New York City.

* See Program of Public Community Meeting, Monday night, page 274.

2. *Convulsive Disorders Related to Disturbances of Metabolism*—Irvine McQuarrie, M. D., University of Minnesota Medical School, Minneapolis.

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THIRD GENERAL MEETING

Wednesday, May 2, 11 a. m.

CHARLES A. DUKES, M. D., *Chairman of Public Relations Committee*, Presiding Officer

1. *What of the Future in the Status of County Hospitals?*—John M. Pierce, M. B. A., Los Angeles.
2. *Work of the Department of Public Relations*—Walter M. Dickie, M. D., Director.
3. *Plans of County Medical Societies for Medical Hospital Service.* (Five-minute discussion.)
San Francisco County—Alson R. Kilgore, M. D.
Alameda County—William E. Mitchell, M. D.
Santa Clara County—John Hunt Shephard, M. D.
Fresno County—Axcel Anderson, M. D.
San Diego County—Lyell C. Kinney, M. D.
Riverside County—C. Van Zwalenburg, M. D.
4. *San Fernando Plan*—Phoebus Berman, M. D., Los Angeles.

II—HOUSE OF DELEGATES MEETINGS

31st ANNUAL SESSION

Galleria, Mission Inn

PROGRAM OF FIRST MEETING

Monday, April 30, 8 p. m.

Members of the California Medical Association who attend are requested not to take seats reserved for delegates, in order to avoid confusion when votes are being taken.

Order of Business

1. Call to order.
2. Announcement by the Speaker on personnel of:
 - (a) Credentials Committee: Lemuel P. Adams, Oakland; Charles T. Sturgeon, Los Angeles; Ruggles A. Cushman, Talmage.
 - (b) Reference Committee on Reports of Officers and of Standing Committees: Alson R. Kilgore, San Francisco; E. Eric Larson, Los Angeles; William H. Barrow, San Diego.
 - (c) Reference Committee on Resolutions and on New and Miscellaneous Business: William R. Molony, Sr., Los Angeles; Phil Gilman, San Francisco; F. N. Scatena, Sacramento.
3. Report of Credentials Committee.
4. Roll Call.
5. Address of President George G. Reinle.
6. Report of the Council, T. Henshaw Kelly, Chairman.
7. Report of the Auditing Committee, Karl L. Schaupp, Chairman.
8. Report of the Secretary-Treasurer, Emma W. Pope.
9. Report of the Editor, George H. Kress.
10. Report of the General Counsel, Hartley F. Peart.
11. Report of the Chairman of the Committee on Public Relations, Charles A. Dukes.
12. Report of the Chairman of the Cancer Commission, Charles A. Dukes.
13. Report of The Trustees Of The California Medical Association, T. Henshaw Kelly, President.
14. Unfinished business.
 - (a) Amendments to Constitution.
15. New business. (Introduction of resolutions.)
16. Reading and adoption of minutes.
17. Adjournment.

PROGRAM OF SECOND MEETING

Wednesday, May 2, 8 p. m.

Members of the California Medical Association who attend are requested not to take seats reserved for delegates, in order to avoid confusion when votes are being taken.

Order of Business

1. Call to order.
2. Roll call.
3. Announcement of meeting place of 1935 annual session.
4. Election of:
 - (a) President-Elect.
 - (b) Speaker of the House of Delegates.
 - (c) Vice-Speaker of House of Delegates.
 - (d) Councilors.
Third District—Incumbent, Henry J. Ullmann, Santa Barbara (1934).
Sixth District—Incumbent, Karl L. Schaupp, San Francisco (1934).
Ninth District—Incumbent, Henry S. Rogers, Petaluma (1934).
Councilors-at-Large—Incumbents:
William H. Kiger, Los Angeles (1934).
Junius P. Harris, Sacramento (1934).
(e) Delegates and Alternates to American Medical Association for sessions 1935-1936.
Incumbents of session 1934 are:

Delegates	Alternates
C. A. Dukes	Edward N. Ewer
Oakland	Oakland
Carl R. Howson	Edward M. Palette
Los Angeles	Los Angeles
Junius B. Harris	John Hunt Shephard
Sacramento	San Jose
William R. Molony, Sr.	John C. Ruddock
Los Angeles	Los Angeles
5. Approval of members of standing committees elected by the Council.
6. Report of Reference Committee on Reports of Officers and Standing Committees.
7. Report of the Reference Committee on Resolutions and on New and Miscellaneous Business.
8. Presentation of President.
9. Presentation of President-Elect.
10. Reading and adoption of minutes.
11. Adjournment.

III—RÉSUMÉ OF OFFICIAL MEETINGS

Hours and Places Where Held

MEETINGS

General Meetings

All general meetings will be held in the auditorium.
Monday, 10 to 12 noon—Addresses by invited guest speakers.
Tuesday, 11 a. m. to 1 p. m.—Addresses by invited guest speakers.
Wednesday, 11 a. m. to 1 p. m.—Medical Economics meeting.

Meetings of the House of Delegates

Monday and Wednesday evenings, April 30 and May 2, at 8 p. m. in Galleria, Mission Inn.

Council Meetings

All meetings of the Council will be held in the Alhambra Room.
First meeting, Sunday, April 29, 2 p. m.
Second meeting, Monday, April 30, 2:30 p. m.
Third meeting, Tuesday, May 1, 9 a. m.

Fourth meeting, Wednesday, May 2, 2:30 p. m.
Fifth meeting, Thursday, May 3, 9 a. m.
Meeting of State and County Officers.
Members will meet at luncheon on Tuesday, May 1, at 1 p. m. in the Spanish Arcade.

Public Community Meeting

For program, see page 274.

Meeting of Committee on Scientific Work

Members will meet at luncheon on Wednesday, May 2, in the Spanish Arcade.

Section Meetings

These are given under major heading "IX—Section Meetings," which follows (page 277).

Organization Meetings of All Standing Committees

Members of all Standing Committees are urged to contact one another and discuss plans for the next year's work.

Table I—Time and Places of Various Meetings and Entertainment

Sunday April 29	2 p. m.	Council (Alhambra Room).
Monday April 30	10 a. m.–1 p. m. 2–5 p. m. 2:30 p. m. 8 p. m. 8 p. m.	First General Meeting (Auditorium). Section Meetings: For meeting places of Sections, see Table II, which follows. Council (Alhambra Room). First House of Delegates Meeting (Galleria). Public Community Meeting (Auditorium).
Tuesday May 1	9–11 a. m. 9 a. m. 11 a. m.–1 p. m. 1 p. m. 2–5 p. m. 7 p. m.	Section Meetings. General Medicine at 8:30 a. m. See Table II. Council (Alhambra Room). Second General Meeting (Auditorium). Luncheon for State and County Officers of California Medical Association (Spanish Arcade). Entertainment. (See program on page 275.) Dinner and Entertainment in honor of the President (Main Dining Room and Auditorium).
Wednesday May 2	9–11 a. m. 11 a. m.–1 p. m. 1 p. m. 2–5 p. m. 2:30 p. m. 8 p. m.	Clinics (Auditorium). Third General Meeting (Auditorium). Luncheon for Committee on Scientific Work and Section Officers (Spanish Arcade). Section Meetings. See Table II. Council (Alhambra Room). Second House of Delegates Meeting (Galleria).
Thursday May 3	9–12 a. m. 9 a. m.	Section Meetings. Council (Alhambra Room).

Table II—Time and Places of Section Meetings

	Convention Hall (Auditorium)	Music Room (Hotel)	Galleria (Hotel)	Deaver Room (Auditorium)	Pilgrim Room (Congreg. Church)	Billiard Room (Hotel)	Green Room (Auditorium)
Monday April 30 2–5 p. m.	Medicine and Radiology (Dr. Cecil) (Dr. Camp)	Surgery	Pediatrics	Urology	Industrial Medicine and Surgery	Neuropsychiatry	Pathology and Bacteriology
Tuesday* May 1 9–11 a. m.	Medicine	Surgery and Neuropsychiatry	Obstetrics and Gynecology	Eye, Ear, Nose and Throat	Urology	Dermatology and Syphilology	Radiology
Wednesday May 2 2–5 p. m.	Medicine and Pathology	Surgery	Pediatrics and Nose and Throat (Dr. McQuarrie)	Radiology (Dr. Camp)		Neuropsychiatry	Anesthesiology
Thursday May 3 9–12 a. m.	Medicine	Surgery	Obstetrics and Gynecology	Eye, Ear, Nose and Throat		Dermatology and Syphilology	Anesthesiology

* Tuesday, 2 to 5 p. m., the Industrial Medicine and Surgery Section will hold its second meeting in the Pilgrim Room, Congregational Church.

Table III—Schematic Plan of Section Meetings

Date	Section	Place of Meeting	Papers Presented
Monday April 30 2-5 p. m.	General Medicine and Radiology General Surgery Industrial Medicine Neuropsychiatry Pathology Pediatrics Urology	Auditorium, Convention Hall Mission Inn, Music Room Congregational Church, Pilgrim Room Mission Inn, Billiard Room Auditorium, Green Room Mission Inn, Galleria Auditorium, Deaver Room	31, 32, 33, 34, 35, 36, 37 55, 56, 57, 58, 59, 60 75, 76, 77, 78, 79 84, 85, 86, 87 100, 101 102, 103, 104, 105 117, 118, 119, 120, 121
Tuesday May 1 9-11 a. m.	Dermatology Eye, Ear, Nose and Throat General Medicine (8:30) General Surgery and Neuropsychiatry Industrial Medicine (2 to 5 p. m.) Obstetrics and Gynecology Radiology Urology	Mission Inn, Billiard Room Auditorium, Deaver Room Auditorium, Convention Hall Mission Inn, Music Room Congregational Church, Pilgrim Room Mission Inn, Galleria Auditorium, Green Room Congregational Church, Pilgrim Room	11, 12, 13, 14, 15, 16 22, 23, 24, 25 38, 39, 40, 41, 42 61, 62, 63, 64 80, 81, 82, 83 92, 93, 94, 95 110, 111 122, 123, 124, 125, 126
Wednesday May 2 2-5 p. m.	Anesthesiology General Medicine and Pathology General Surgery Neuropsychiatry Pediatrics and Nose and Throat Radiology	Auditorium, Green Room Auditorium, Convention Hall Mission Inn, Music Room Mission Inn, Billiard Room Mission Inn, Galleria Auditorium, Deaver Room	1, 2, 3, 4, 5 43, 44, 45, 46, 47, 48, 49 65, 66, 67, 68, 69 88, 89, 90, 91 106, 107, 108, 109 112, 113, 114, 115, 116
Thursday May 3 9-12 a. m.	Anesthesiology Dermatology Eye, Ear, Nose and Throat General Medicine General Surgery Obstetrics and Gynecology	Auditorium, Green Room Mission Inn, Billiard Room Auditorium, Deaver Room Auditorium, Convention Hall Mission Inn, Music Room Mission Inn, Galleria	6, 7, 8, 9, 10 17, 18, 19, 19a, 20, 21 26, 27, 28, 29, 30 50, 51, 52, 53, 54 70, 71, 72, 73, 74 96, 97, 98, 99

IV—CLINICS

Convention Hall, Auditorium, Wednesday, May 2, 9 to 11 a. m.

Medical Clinic, 9 to 10 a. m.—Conducted by Russell L. Cecil, M. D., Associate Professor of Medicine, Cornell University Medical School, New York City.

Subject: *Subacute Bacterial Endocarditis*.

Surgical Clinic, 10 to 11 a. m.—Conducted by Leo Eloesser, M. D., Clinical Professor of Surgery, Stanford University School of Medicine, San Francisco.

Subject: *Empyema*.

V—PUBLIC COMMUNITY MEETING

PUBLIC COMMUNITY MEETING

Monday, April 30, 8 p. m.

BON O. ADAMS, M. D., *Presiding Officer*

1. *What the California Medical Association Is Doing About Cancer*—Alson R. Kilgore, M. D., Secretary of Cancer Commission, California Medical Association.
2. *Use of X-Rays in Medical Diagnosis*—John D. Camp, M. D., Mayo Clinic, Rochester, Minnesota.

3. *The Arthritis Problem*—Russell L. Cecil, M. D., Assistant Professor of Medicine, Cornell University, New York.

4. *The Benefits of Preventive and Curative Medicine*—F. M. Pottenger, M. D., Member of Scientific Program Committee, California Medical Association, Los Angeles.

VI—SCIENTIFIC EXHIBITS

Municipal Auditorium*

1. *A Systemic Factor in Development of Cancer*—Montrose T. Burrows, M. D., Pasadena.

Cases to show how cancer of skin and breast may be caused to disappear by treating patient for conditions causing cachexia. Forty cases of cancer of skin have disappeared under such treatment. Also three cases recurrent cancer of breast.

2. *Wax Models of Cancer of Breast*—J. M. Flude, M. D., Hollywood, for the American Society for the Control of Cancer.

Complete presentation of etiology, diagnosis and treatment of breast cancer.
3. *Photographic Display Showing Technique in Using Modern Medical and Surgical Photographic Diagnostic Aids—Personal Advice on Medical Photographic Problems*—Richard Millar, Ph. D., Los Angeles.

Pictorial wall display of medical and surgical cases. Motion pictures describing endoscopic photographic technique in making photographs of interior of stomach, bladder, eye, nose, and throat, etc.

4. *Environmental Factors in Allergy*—George Piness, M. D., Los Angeles.

Practical and inclusive exhibit of various allergic substances present in environment and diet, stressing less obvious substances that are frequently overlooked. Practical testing technique for common California pollens.

* There will also be exhibits by Harold L. Thompson, M. D., Henry Newman, M. D., Franklin Farman, M. D., William H. Daniel, M. D., and A. Elmer Best, M. D. Requests were received too late for inclusion of abstracts.

5. *Bladder Operations Shown in an Illuminated Box*—Henry A. R. Kreutzmann, M. D., San Francisco.
Various bladder operations with cystoscope. Still and motion pictures of proceedings.

6. *Cancer—Diagnosis and Treatment by Radiological and Electrosurgical Methods*—Doctors Soiland, Costolow, and Meland, Los Angeles.

Cancer of breast—diagnostic treatment and results. Thirty-six transparent positive films, each 8 x 10 inches.

Multiplex display case with pictures of various tumors—lip, oral cavity, face, head, etc. (Personal demonstration.)

Model of 1,000,000 volt x-ray machine.

7. *Biophysical Principles of the Lethal Dose for Cancer*—George S. Sharp, M. D., Pasadena.

A lethal cancer dosage may be calculated on the basis of size, type of growth, radiation sensitivity, location, etc. Physical measurements, diagrams, and actual photographs of patients are presented, illustrating various methods. Microphotographs of biopsies.

8. *Treatment of Superficial Malignancies*—H. J. Ullmann, M. D., Santa Barbara.

9. *Charts, Photographs, Specimens, and Continuous Film of Malignancies*—Hiram Wearn, M. D., Chair-

man of Malignancy Committee of Hollywood Hospital, Hollywood.

Material used during past six years in diagnostic and consultation work.

10. *An Exhibit of Comparative Pathologic and Physiologic Osseous Conditions*—Frank B. Young, M. D., Long Beach.

This exhibit consists of pathologic bone, joint and dental conditions, some of them recent and some very ancient.

11. *Results in One Hundred Cases of Facial Malformations and Disfigurements*—H. O. Barnes, M. D., Los Angeles.

A display which depicts in life-size projection on a screen a series of over one hundred common facial defects. The views are arranged to present, simultaneously, in the left field the condition complained of; in the right field, the result as corrected. Apparatus automatically changes the view every eight seconds.

12. *Hernia*—Leigh Watson, M. D., Los Angeles.

Exhibit of drawings and photographs on subject of hernia.

13. *Unusual Manifestations of Common Skin Diseases*—Samuel Ayres, M. D., and Nelson P. Anderson, M. D., Los Angeles.

This exhibit will cover some of the less common and unusual manifestations of the more common skin conditions. It will consist entirely of clinical photography.

VII—ENTERTAINMENT PROGRAM

Tuesday Afternoon Entertainment.—The Commanding Officer of March Field, United States Aviation Base, has cordially invited the Association and its guests to witness a *demonstration of aerial warfare* which will consist of an attack on the Field by a bombardment wing, with defense and pursuit planes taking part. This will be under radio control and orders audible to the visitors by loudspeakers. The demonstration planned will be very thrilling and most interesting. This will be followed by aerial acrobatics and an inspection of the Field.

President's Dinner—Tuesday Evening, May 1—An Evening in Spain.—Dinner at the Mission Inn with its Spanish setting and troubadours. Tickets, \$2 to members registered at other hotels than Mission Inn. No charge to guests registered at the Inn.

Entertainment in the auditorium follows the dinner. The two-act opera, I Pagliacci, will be given by the Riverside Community Opera Association, under the direction of Marcella Craft, and this will be followed by a dance.

Golf Announcement.—Victoria Club links will be open to Association members during the week of the convention.

The annual tournament will be held Tuesday afternoon, May 1. There will be two classes and four prizes. Low gross, and low net in each class will be awarded cups which will be provided by President Reinle, President-Elect Toland, the Riverside County Medical Society, and the Mission Inn. For additional information, see C. W. Girdlestone, Chairman, H. L. Ratliff, or W. K. Templeton.

VIII—WOMAN'S AUXILIARY

WOMAN'S AUXILIARY to the CALIFORNIA MEDICAL ASSOCIATION

1934 Annual Convention

Mission Inn, Riverside

April 30-May 3, 1934

COMMITTEE ON ARRANGEMENTS

Mrs. Hervey Faris, Chairman

Mrs. Arthur W. Walker

Mrs. W. W. Roblee

Mrs. C. Van Zwalenburg

Mrs. Erwin Miller

PROGRAMS OF MEETINGS AND ENTERTAINMENT

Sunday, April 29

Arrival of Auxiliary delegates, members, and guests.

Monday, April 30

8:45 a.m.—State Board meeting.

9:00 a.m.—Registration in the presidential suite.

11:00 a.m.—Tour of the Inn.

1:00 p.m.—Golf at Victoria Club.

3:00 to 5:00 p.m.—Tea in honor of Mrs. George Reinle and wives of guest speakers at Victoria Club. Mrs. Paul Thureson, chairman.

8:00 p.m.—Program by Cancer Commission at Memorial Auditorium.

Tuesday, May 1.

8:30 a.m.—Registration in the presidential suite.

8:30 a.m.—Breakfast in honor of the Auxiliary president, Mrs. A. M. Henderson, Mission Inn. Mrs. F. E. Coulter, presiding. Mrs. Thomas A. Card, chairman.

10:00 a.m.—Opening session of fifth annual convention, Universalist Church. Mrs. A. M. Henderson, presiding.

2:00 p.m.—Air review at March Field.

7:00 p.m.—President's dinner, Mission Inn.

Wednesday, May 2

9:00 a.m.—Registration in the presidential suite.

9:30 a.m.—Second session and election of officers, Universalist Church.

1:00 p.m.—Luncheon in honor of the president-elect, Mrs. Philip Schuyler Doane, at Arrowhead Springs Hotel. Miss Erwin Miller, chairman.

8:00 p.m.—Dancing and bridge, Mission Inn.

RIVERSIDE—1934 CALIFORNIA MEDICAL ASSOCIATION CONVENTION CITY

No more interesting or beautiful city is to be found in California than is our convention city for the 1934 session. Mrs. Henderson's letter, published elsewhere in this issue, gives some of the reasons why every member who can possibly do so should come and bring his wife to this meeting.

Riverside is a city typical of California at its best. Its tree-lined streets, Mission architecture, groves of golden oranges, and general atmosphere of hospitality never fail to impress the visitor with the feeling that here is the real California.

Riverside is known as an ideal convention city, being far enough removed from the distractions of Los Angeles so that the delegates will devote their time to the convention, and large enough to furnish entertainment and diversion.

Conventions are held in the Memorial Auditorium, which is considered one of the outstanding structures of its kind, its sunken garden being particularly attractive. The interior is a combination of the inclined and flat floor types of convention hall. The exhibit hall in the basement is an excellent convention feature.

Just a block from the auditorium is the world-famed Mission Inn, with its Spanish Art Gallery, Cloister, Court of Birds, Court of Bells, open-air dining court, valuable collections of bells, antiques and Japanese art, its palms and orange trees. Wherever California is known, the Mission Inn is remembered as one of its best loved points of interest.

For fifty years tourists from all parts of the world have visited this unique hostelry, with its gardens, cloisters, pergolas, patios, art galleries, its collections of Spanish antiques, paintings, historical objects, bells, crosses and international dolls, and its early California atmosphere. The Inn is an expression of the dreams of Frank A. Miller, one of the outstanding figures in California history. It is a favorite place for weddings and hundreds of happy couples have passed through the "Doorway of Happiness" into the St. Francis Chapel for the ceremony. Writers, artists and other nationally known persons come here to rest and think. Two years ago a \$500,000 addition, the Rotonda Internacional, St. Francis Chapel with its golden Mexican altar and Tiffany windows, the Galleria and the Oriental Court, was completed. During the past few years the Inn has come to be recognized as the ideal convention hotel of Southern California, and it is indeed a privilege for delegates to attend a convention here.

Visitors to Riverside should not fail to ride to the top of Mount Rubidoux, location of the Easter sunrise services. Here is the World Peace Tower and the Father Serra Cross and an inspiring view of the Santa Ana River valley with the snow-clad Sierra in the background. The peace tower is a testimonial of affection erected by the friends of Frank Miller, builder and master of the Mission Inn, who was also the inspiration and one of the founders of the Institute of International Relations, a world peace movement holding its sessions each December at the Inn.

Lying at the foot of the mountain is Fairmount Park, the quiet waters of Lake Evans shimmering in the sunshine. This beautiful park is a mecca for the people of three counties for picnics. The lake was donated to Riverside by a former mayor, S. C. Evans. Some of the mulberry trees planted in 1868, when the Santa Ana valley was intended to be a silk center, are still flourishing in the park.

Riverside is the center of the Orange Empire, midway between mountain lakes and ocean beaches, the desert and Los Angeles—a most convenient place in which to live and enjoy sunny Southern California.

Riverside was settled in 1870 and the first seedling orange trees were planted by Dr. K. D. Shugart in 1871, irrigation water being hauled in barrels from the Santa Ana River, as Riverside was then a desert.



Memorial Auditorium, Riverside

In 1873 William Saunders of the United States Department of Agriculture sent two navel orange trees which had been imported from Bahia, Brazil, to Mrs. Eliza C. Tibbets. Mr. Tibbets made the three-day round trip to the Los Angeles postoffice for them. The trees were set out in the garden of the Tibbets home and grew splendidly, bearing a new type of fruit which quickly became popular and this new variety was termed the "Washington navel orange."

These two trees, from which California's navel orange crop has sprung, remained in the Tibbets garden until May 8, 1903, when one was replanted in the courtyard of the Mission Inn by President Roosevelt. This tree died in 1921, but was replaced on March 20, 1923, by a "daughter" tree.

The other parent tree was transplanted in Low Park, where it still stands, protected by an ornamental iron grill and marked by a four-ton boulder. The boulder, containing a bronze tablet, was placed by the Landmarks Committee of the D. A. R. and was unveiled to the public on December 10, 1921.

The navel orange industry of today has a romantic background of the early struggles and heart-breaking toil that transformed a desert into a garden, that would astound the brown-garbed missionaries and care-free Spaniards who once made Southern California their home. It is fitting that the woman who made the industry possible be honored by all.

An outstanding point of interest is Sherman Indian Institute, at which eight hundred Indian boys and girls are being educated by the Government. It is located on Magnolia Avenue, one of Riverside's beautiful drives.

The Citrus Experiment Station of the University of California is located here and deserves a visit from those interested in orange culture.

Near Riverside is March Field, pursuit group headquarters of the United States Army Air Service. Over \$5,500,000 is being expended in a building program.

The commanding officer has invited the members of the Association to be guests of the Field on Tuesday afternoon, when a thrilling demonstration will be given of army air craft maneuvers.

Golf.—The Victoria Club, a par 72 eighteen-hole course, will be available for golf enthusiasts during the entire convention. Tournament Tuesday afternoon.

Palm Springs.—Beautiful desert oasis, two-hour drive from Riverside over the "Pines to Palms" mountain boulevard, returning via the San Geronimo pass. A visit to the date gardens at Indio, a half-hour drive from Palm Springs, transports one to a bit of Morocco or Algiers. The hundreds of acres of date gardens, where only in America the choicest varieties of this luscious fruit can be grown, can be seen in this half-day drive over splendid state highways.

IX—SECTION MEETINGS

Scientific Section Programs

(Sections are arranged alphabetically. Numbers in parenthesis after each section indicate sequence reference numbers of papers read in each section.)

I.—Anesthesiology (1-10)	277
II.—Dermatology (11-21)	278
III.—Eye, Ear, Nose and Throat (22-30)	279
IV.—General Medicine (31-54)	280
V.—General Surgery (55-74)	282
VI.—Industrial Medicine and Surgery (75-83)	284
VII.—Neuropsychiatry (84-91)	285
VIII.—Obstetrics and Gynecology (92-99)	286
IX.—Pathology and Bacteriology (100-101)	286
X.—Pediatrics (102-109)	287
XI.—Radiology (110-116)	287
XII.—Urology (117-126)	288
XIII.—Cancer Commission	289

Rules Regarding Papers and Discussions at the Annual State Session:

Upon recommendation of the Executive Committee, the following rules regarding papers have been adopted by the Council:

1. All papers read before a section of an annual session are the property of CALIFORNIA AND WESTERN MEDICINE.
2. The maximum time that may be consumed by any paper is fifteen minutes, provided that not to exceed ten minutes' latitude may be allowed invited guests at the discretion of the presiding chairman.
3. The maximum time permitted any individual to discuss a paper is four minutes. This also applies to the author in closing his discussion. No speaker may discuss more than once any one subject. The presiding officer of each section is expected to enforce these rules.
4. A copy of each and every paper presented at the state meeting must be in the hands of the chairman or secretary of the section or in the hands of the general secretary before the paper is presented.
- Each paper must be typewritten in double space. Single space and carbon copies are not acceptable.
5. All papers read at an annual session of the California Medical Association automatically become the property of the Association (By-Laws, Chapter VI, Section 4). The Committee on Publications of the official publication, CALIFORNIA AND WESTERN MEDICINE, decides whether or not the paper submitted is of such nature as to be published in full in CALIFORNIA AND WESTERN MEDICINE or in abstract form. (In case the latter procedure is followed, the expense of setting up the type for reprints may be borne by the Association.) It is also the ruling that when any section has a larger number of papers on its program than can be covered in a two-day session, that not more than the average number of papers from such section shall be printed, unless for special reasons. Manuscripts not accepted for CALIFORNIA AND WESTERN MEDICINE will be returned to the authors, for submission to other medical journals, if so desired.
6. Articles are accepted for place on the program on condition that they are also contributed *solely* to CALIFORNIA AND WESTERN MEDICINE. Authors desiring to publish their papers elsewhere than in the journal must make written request to the editor. Papers submitted at meetings of this Association must not have been previously submitted or printed elsewhere.
7. No paper will be accepted by the General Program Committee nor by Section Program Committees unless accompanied by a synopsis of not to exceed fifty words.
8. Papers shall not be "read by title." Papers should be original typewritten copies, double spaced, and should be handed to the section secretary after having been read.
9. No member may present more than one paper at any annual session, provided that a member may be a collaborator on more than one paper, if these papers are presented by different authors.
10. Failure on the part of an author to present a paper precludes acceptance of future papers from such author for a period of two years, unless the author explains to the satisfaction of the Executive Committee his inability to fulfill his obligations.

Numbering of Section Papers

For convenience in reference, papers are numbered in serial sequence for the entire session, instead of a separate sequence for each section.

Business Meetings of Sections

Time of business meetings and elections of officers of sections will be scheduled on section blackboards by section secretaries, and through preliminary announcements by section chairmen.
Unless otherwise announced, the business meeting of each section and the election of officers will be held immediately after the reading of the second paper on the second day's section program.

I

ANESTHESIOLOGY SECTION

JOHN MILLER WILSON, M. D., *Chairman*
605 Professional Building
65 North Madison Avenue, Pasadena
ETHEL RIGHETTI, M. D., *Secretary*
319 Walnut Street, San Francisco

First Meeting—Green Room, Auditorium
Wednesday, May 2, 2 to 5 p. m.

1. *Chairman's Address—Bad Anesthetic Risks and Their Management*—J. M. Wilson, M. D., Pasadena.
2. *Mechanism of Carbon Dioxid Therapy, with Especial Reference to the Lungs*—A. J. Wineland, M. D., 338 South Saint Andrews Place, Los Angeles.

The benefit of carbon dioxid administration in pulmonary conditions is almost entirely physical. Its action in prevention of pulmonary pathology, and in preventing the advance of an already established lesion is greater than its curative value.

The paper takes up the mechanism of action of this gas as a prophylactic and therapeutic agent in chest conditions.

3. *Intratracheal Anesthesia*—Mary E. Botsford, M. D., 807 Francisco Street, San Francisco.

Advantages and disadvantages of the method. Indications for its use. Application to other than intrathoracic operations. Difficulties and dangers of tracheal catheterization. Comparison of various methods—direct vision with bronchoscope, nasal, Connell tube, manual. Choice of anesthetic agent. Description of various types of apparatus for its administration.

4. *Surgical Relaxation*—Robert Burrows, M. D., Stanford University Hospital, San Francisco.

Degree of relaxation obtained by various anesthetic agents and methods. Surgeons' needs and demands. Effects on patient, immediate and remote, of various degrees of relaxation. Necessity of coöperation between surgeon and anesthetist.

5. *Nitrous Oxid and Oxygen in Obstetrics*—Edward H. Lane, M. D., 201 North Manhattan Place, Los Angeles.

A short résumé regarding the administration of N₂O-O in obstetrics in approximately one thousand cases during a ten-year period, 1918-1928.

These cases were mostly attended in the home and without loss of a mother or child, and but two blue, or cyanosed babies, and trust it may be of some assistance especially to the doctors in general practice away from good hospitals and competent anesthetists.

RECESS

Election of Officers and Business Meeting



Second Meeting—Green Room, Auditorium
Thursday, May 3, 9 to 12 a. m.

6. *Anesthesia for Thoracic Surgery*—Dorothy A. Wood, M. D., University of California Hospital, San Francisco.

Preoperative preparation and consideration of various preoperative drugs. Position of patient on operating table. Local anesthesia and local anesthesia combined with nitrous oxid-oxygen. Variations in technique of administering nitrous oxid-oxygen.

7. *Local Anesthetic Agents, Toxicities and Idiosyncrasies*—Charles F. McCuskey, M. D., 2446 North Commonwealth, Los Angeles.

Drugs capable of producing anesthesia are toxic. The degree of untoward reaction to these

drugs depends upon the amount and strength of the drug used and the rapidity of its absorption. Some individuals are hypersusceptible to local anesthetic agents. Extreme care and watchfulness must be exercised in such cases to avoid a fatality.

8. *Local Anesthesia of Long Duration for the Elimination of Pain After Rectal Operations*—Norman Joseph Kilbourne, M. D., 2007 Wilshire Boulevard, Los Angeles.

Pain after rectal operations eliminated by infiltration or topical applications of basic eucupin, which is five to thirty times less toxic than nupercain in concentrations of equal anesthetic power. Analgesia for more than three days. Less irritant than older eucupin salts. Enormous superiority to nupercain ointment. Other anesthetics compared. Clinical results in thirty cases.

9. *Anesthesia in Surgery of the Rectum and Sigmoid*—Montague S. Woolf, M. D., 384 Post Street, San Francisco.

The whole realm of anesthesia for surgical purposes, except that produced by infiltration of tissue, belongs to the anesthetist.

The most serviceable type of anesthesia for short operations about the lower rectum and anus is small quantities of a drug injected into the spinal theca. Though inhalation anesthesia may be used, there are some objections.

Spinal anesthesia alone is not as a rule suitable for major procedure on the rectum and sigmoid. A suggested routine.

10. *Apneas Under Ether*—David N. Treweek, M. D., 841 North Harper Street, Los Angeles, and Arthur E. Guedel, M. D., 1800 Angelo Drive, Beverly Hills.

Until recently cessation of respiration under ether anesthesia was considered a danger signal. Now knowing its mechanism, we often encourage its appearance. This paper discusses the mechanism, and its application.



II

DERMATOLOGY AND SYPHILOLOGY SECTION

LOUIS F. X. WILHELM, M. D., *Chairman*
410 California Medical Building
1401 South Hope Street, Los Angeles

C. E. SCHOFF, M. D., *Vice-Chairman*
322 Medico-Dental Building
1127 Eleventh Street, Sacramento

PHILIP K. ALLEN, M. D., *Secretary*
314 Medico-Dental Building
233 A Street, San Diego

First Meeting—Billiard Room, Mission Inn
Tuesday, May 1, 9 to 11 a. m.

11. *Experimental Torula Infections in Laboratory Animals*—John F. Kessell, Ph. D., University of Southern California Medical School, Los Angeles. (By invitation.)

Torula infections in man have been found usually in the brain and spinal cord. Recovery of this fungus from a skin lesion has been rarely recorded. Several strains of torula recovered from the brain or spinal fluid of human cases and one strain recovered from a local lesion have been compared culturally and by experimental inoculation into laboratory animals. Both brain and local cutaneous lesions have been produced in these animals. A comparison of the cultural characteristics of the organisms recovered and of the animal pathology produced is discussed.

Discussion by H. Sutherland-Campbell, M. D., Los Angeles.

12. *Birth-Marks—Some Observations on Treatment*—Charles R. Caskey, M. D., 715 Wilshire Medical Building, Los Angeles.

Description of common types of nevi and brief discussion of treatment. The best time to treat nevi, time required, and what can be expected as fair cosmetic results. Equipment necessary and best suited for treatment of nevi.

Discussion by J. C. Elliott King, M. D., San Diego.

13. *Parapsoriasis*—Chris R. Halloran, M. D., 412 Professional Building, Los Angeles.

Report of two cases, one corresponding to the type designated as "Parapsoriasis Mixta," the other an example of "Parapsoriasis Varioliformis" or "Pityriasis Lichenoides et Varioliformis Acuta."

Review of history, clinical variants, and pathological findings in reported cases of this inter-related group of dermatoses, together with the suggestions that the nomenclature and classification offered by Wise be accepted. (Lantern slides.)

Discussion by Hiram Miller, M. D., San Francisco.

14. *Parapsoriasis Varioliformis*—Moses Scholtz, M. D., 715 Wilshire Medical Building, Los Angeles.

Discussion of case history, morphologic data and laboratory findings with reference to etiologic, differential diagnostic and therapeutic considerations. Critical review and analysis of the previously reported cases. Colored photographs of gross appearance of lesions and microphotographs of histologic sections.

Discussion by Hiram Miller, M. D., San Francisco.

15. *Lymphogranuloma Inguinale*—Frederick G. Novy, Jr., M. D., 360 Twenty-ninth Street, Oakland.

Discussion of "Lymphogranuloma Inguinale" (the fourth venereal disease) with particular reference to its distribution in this country, its etiology, and its diagnosis, and a report of a case originating in this state.

Discussion by Samuel Ayres, Jr., M. D., Los Angeles.

16. *Epidermoid Cysts*—Laurence Taussig, M. D., 384 Post Street, San Francisco.

Epidermoid cysts occur in areas exposed to trauma, particularly on the palms and soles, where they apparently develop following traumatic implantation of surface epithelium into deeper tissues.

A brief review of the literature, citation of experimental work in regard to etiology and review of the wide variety of these lesions. Three cases reported.

Discussion by Stanley O. Chambers, M. D., Los Angeles.

RECESS

Election of Officers and Business Meeting



Second Meeting—Billiard Room, Mission Inn
Thursday, May 3, 9 to 12 a. m.

17. *Chairman's Address*—Louis F. X. Wilhelm, M. D., Los Angeles.

18. *Psoriasis*—Michael L. Ravitch, M. D., 6253 Hollywood Boulevard, Los Angeles.

Conclusion that psoriasis is due to an endocrine disorder, particularly of thyroid gland. The Jewish race suffers from this disease more frequently than the Gentile. Pathological sugar curve in majority of cases. Heredity plays minor part. Found that children make spectacular improvement in almost half the time that adults take. The author pleads for a more thorough study of psoriasis from an endocrinal standpoint.

Discussion by Kendal P. Frost, M. D., Los Angeles.

19. *Yaws and Its Histopathology as Compared with Syphilis*—Arne E. Ingels, M. D., 411 Thirtieth Street, Oakland.

Case report and outline of physical findings. Résumé of the literature mainly concerning the histopathology and its differential diagnosis. Microphotographs presented.

- 19a. *Surgical Treatment of Complications Resulting from Syphilis*—William H. Goeckerman, M. D., 1401 South Hope Street, Los Angeles.

A number of late complications of syphilis may be helped by surgery—after adequate medical treatment has been given. Operative measures most often considered in complications of the nervous system as lightning pains, crises, cord bladder, Charcot joints, mal perforans, ptosis, and strabismus. Surgery in syphilitic splenomegaly, cirrhosis of the liver, and the after results of gastric syphilis is probably called for less often, but the results in a properly selected case may be quite brilliant. Osseous syphilis with its resultant deformity fairly often requires the removal of spicules and sequestra and plastic surgery may be desirable.

Discussion by Frederick G. Novy, Jr., M. D., Oakland.

20. *Nummular Eczema*—Ernest Dwight Chipman, M.D., 2000 Van Ness Avenue, San Francisco.

The paper deals with the general characters of nummular eczema and the lesions with which it might be confounded. Also a discussion as to whether or not it deserves a place as a distinct disease.

Discussion by William H. Goeckerman, M.D., Los Angeles.

21. *Rare and Unusual Manifestations of Common Skin Diseases*—Samuel Ayres, M. D., Jr., and Nelson P. Anderson, M. D., 315 Westlake Professional Building, Los Angeles.

Discussion of the rarer and uncommon manifestations of common skin conditions, including involvement of the face, palms and nails in lichen planus, infantile acne, pustular psoriasis and involvement of the mucous membranes in psoriasis, urticaria, persistent nodules, arspenamin dermatitis and keloids complicating scabies.

Discussion by John M. Graves, M. D., San Francisco.



III

EYE, EAR, NOSE, AND THROAT SECTION

J. ROY JONES, M. D., *Chairman*
California State Life Building, Sacramento

HAROLD A. FLETCHER, M. D., *Vice-Chairman*
1440 Medico-Dental Building
490 Post Street, San Francisco

SAMUEL A. DURR, M. D., *Secretary*
1304 Medico-Dental Building
233 A Street, San Diego

First Meeting—Deaver Room, Auditorium
Tuesday, May 1, 9 to 11 a. m.

22. *Consideration in Histology of the Respiratory Tract in Infants and Children*—Leland J. Hunnicutt, M. D., 98 North Madison Avenue, Pasadena.

Comparison between normal histology of the nose, throat, and bronchial system of the newborn and gradually changed system of a child who has gone through the so-called nonspecific nose and throat infections of early childhood. Noticeable changes in those areas which drain the poorest, except in the turbinates. Flat sur-

faces, such as found in trachea and larger bronchi, require an unusually severe or continued infection to demonstrate noticeable change. Necessary to bear in mind tissue changes that may lower the resistance for future infections.

23. *Rhinosporidium*—Frank S. Baxter, M. D., 1624 Franklin Street, Oakland.

Report of fifth North American case on record and the first reported in a woman. Etiology. Microscopic pathology. Photomicrographs proving the diagnosis. Résumé of literature.

Discussion by Karl F. Meyer, Ph. D., San Francisco.

24. *Esophageal Diverticulum*—Edward F. Ziegelman, M. D., 456 Post Street, San Francisco.

Of the two clinical types of esophageal diverticulum, the pulsion type is amenable to surgical treatment. The diagnosis can be made clinically. Roentgen ray and bronchoscopic findings serve as corroborative evidence. Its pathogeny may be considered to be that of a hernia. Two schools of thought hold sway as to treatment. Both take cognizance of its most dangerous surgical complication, mediastinitis. (Lantern slides.)

Discussion by Charles T. Sturgeon, M. D., Los Angeles.

25. *The Humanitarian Side of Otology*—Mr. George E. Coleman, Hooper Foundation for Medical Research, San Francisco. (By invitation.)

Discussion of the many factors contributing to the attitude toward the otologist of those with chronic or progressive deafness. Attitude engendered to some extent by apathy or misunderstanding of the psychology and sociology of the deafened, on the one side, and on the side of the deafened by insufficient scientific knowledge and a failure fully to comprehend the high ideals of the medical profession. Welfare work for the deafened explained and plea made for closer coöperation between otologists and the deafened as a class. Suggestions as to how this might be brought about.

Discussion by Isaac H. Jones, M. D., Los Angeles, and Harold A. Fletcher, M. D., San Francisco.

RECESS

Election of Officers and Business Meeting



Second Meeting—Galleria, Mission Inn

Joint Meeting of Pediatrics and Nose and Throat Sections

Wednesday, May 2, 2 to 5 p. m.

The program of this joint meeting is printed under the second meeting of the Pediatric Section (page 287).



Third Meeting—Deaver Room, Auditorium

Thursday, May 3, 9 to 12 a. m.

26. *Bacterial Allergy in Ophthalmology*—Harold F. Whalman, M. D., 938 Roosevelt Building, 727 West Seventh Street, Los Angeles.

A discussion of the principles governing bacterial hypersensitiveness and resistance, and the relation of these principles to the altered reaction capacity in the various tissues of the eye. Sensitization of the eye from focal infection, tuberculosis and syphilis. The treatment of ocular inflammations resulting from these causes by means of foreign protein reactions, active immunization and desensitization.

Discussion by Albert H. Rowe, M. D., Oakland.

27. *Ocular Movements Under Cover—A Roentgenographic Study*—Frank H. Rodin, M. D., 490 Post Street, and Robert R. Newell, M. D., Stanford University Medical School, San Francisco.

Roentgenographic study of movements of the eyeballs under cover was undertaken, using silver markers. Study showed that when either a pad or a bandage is applied to only one eye, very little change in the movements of the covered eye take place. When eye pads are applied to both eyes, some limitation in the movements of the eyes was noted. When both eyes are bandaged, definite limitation of the movements of the eyes in all directions was observed. The conclusion is that if complete rest of an eye or eyes is desired, it is necessary to bandage both eyes.

Discussion by Clifford Walker, M. D., Los Angeles.

28. *The Hydrogen Ion Concentration of Tears*—George N. Hosford, M. D., 1242 Medico-Dental Building, 490 Post Street, San Francisco.

Methods of determining the pH of tears and previous determinations on record. The work of Gifford and Smith. Demonstration that the tears are sufficiently buffered to permit enough dilution for satisfactory colorimetric determination of the pH. Discussion of the salt error. The average pH of tears from one hundred eyes that were clinically normal and were causing no symptoms. The variation in pH observed in cases of corneal injury and corneal and conjunctival lesions. The relief of symptoms by buffer solutions. Relation of pH to healing. The therapeutic use of buffer solutions and substances.

Discussion by H. J. Duel, Jr., M. D., Los Angeles.

29. *The Treatment of Chronic Uveitis Associated with Hypertension*—Morie F. Weymann, M. D., 2007 Wilshire Boulevard, Los Angeles.

The diagnosis of uveitis associated with hypertension in its early stages is facilitated by the use of the biomicroscope, which shows active inflammatory products in the aqueous. Commoner foci of infection are etiologic factors. Generally, hygienic measures, tuberculin therapy, and antisyphilitic therapy are to be used. Locally, drugs which produce mydriasis and also diminish tension are of great value. Prolonged mydriasis incurs danger of anterior synechia with subsequent loss of globe. Repeated paracentesis or iridectomy should not be delayed when medicinal measures fail to control the condition.

Discussion by Otto Barkan, M. D., San Francisco.

30. *A Safe Technique for the Intracapsular Extraction of Senile Cataract—Report of One Hundred Cases*—Joseph L. McCool, M. D., and C. Allen Dickey, M. D., 450 Sutter Street, San Francisco.

The two most important factors which determine the success or failure of any operation on the globe are complete anesthesia and satisfactory akinesis. The former can be attained; however, the tone of the extra-ocular muscles and their involuntary contraction still present a problem to be solved.

The author offers a method of lid control which he considers an improvement over specula and lid hooks.

The mechanics of the dislocation of the lens in the intracapsular extraction of the senile cataract will be discussed.

Discussion by Ray Irvine, M. D., Los Angeles.

IV

GENERAL MEDICINE SECTION

FRED H. KRUSE, M. D., *Chairman*
916 Fitzhugh Building, 384 Post Street
San Francisco

HILMAR O. KOEFOD, M. D., *Secretary*
1421 State Street, Santa Barbara

First Meeting—Municipal Auditorium
Monday, April 30, 2 to 5 p. m.

Joint Meeting of General Medicine and Radiology
Sections

Symposium on Arthritis

31. *The Treatment of Chronic Arthritis*—Russell L. Cecil, M. D., 33 East Sixty-first Street, New York City. (By invitation.)

32. *Roentgenologic Findings in Non-Tuberculous Arthritis*—John D. Camp, M. D., Mayo Clinic, Rochester, Minnesota. (By invitation.)

A general discussion of the roentgenographic changes associated with the various forms of nontuberculous arthritis. Significance and limitations of the fundamental roentgenographic changes (soft tissue abnormalities, osteoporosis joint destruction, and bone proliferation) as related to the classification and diagnosis of different types of arthritis, will be emphasized.

33. *The Treatment of Chronic Arthritis by Diet and Sunlight*—Lovell Langstroth, M. D., 516 Sutter Street, San Francisco.

Patients with degenerative or proliferative arthritis have an inherent tendency to degeneration of joint cartilage or infection of the joint by an attenuated organism. Their disease develops under average environmental conditions of diet, sunlight, and rest, but may be arrested by improving these conditions.

34. *The Orthopedic Treatment of Chronic Arthritis*—Ellis Jones, M. D., 201 Medical Office Building, Los Angeles.

Operative and non-operative orthopedic measures commonly employed discussed. Importance of constantly changing pathology in the arthritic joint emphasized. Surgical procedures, limited in contrast to the value of non-operative methods utilized to prevent deformity and to restore muscle and joint function. Imperative need for early and more active coöperation between the physician in charge and the orthopedic surgeon and for a less purely surgical outlook on the part of the latter.

35. *A Review of the Status of Focal Infection with Reference to the Etiology of Chronic Arthritis*—Arthur Bloomfield, M. D., Stanford University Hospital, San Francisco.

The general development of the doctrine of focal infection, as considered from the historical, experimental, and clinical standpoints, and its relation to the cause of arthritis is discussed, together with actual results of treatment of chronic arthritis by elimination of foci of infection.

36. *Does Vitamin C Deficiency Play a Role in Rheumatoid Arthritis?—Experimental Observations*—James F. Rinehart, M. D., University of California Medical School, San Francisco.

Experimental data are presented pointing toward a relation of vitamin C deficiency to rheumatoid arthritis. Joint lesions, with fundamental pathologic similarities to those of rheumatoid arthritis produced in guinea-pigs maintained on a vitamin C deficient diet and particularly in animals maintained on the same deficient diet and subjected to infection, are described.

37. *Gonorrheal Arthritis—Treatment by Electropyrrexia*—Rodney F. Atsatt, M. D., and Luella E. Paterson, 1421 State Street, Santa Barbara.

Gonorrheal arthritis can be successfully treated by electrically induced fever therapy. The procedure consists of hyperthermia to 104 degrees Fahrenheit or 105 degrees Fahrenheit for three hours. Two to four treatments are necessary. Local benefits also accrue inasmuch as sinuses become negative in a large percentage of cases.

Discussion of symposium by W. Paul Holbrook, M. D., Tucson, Arizona; W. R. MacAusland, M. D., Boston, Massachusetts; Lowell S. Goin, M. D., Los Angeles; and L. Henry Garland, M. D., San Francisco.



**Second Meeting—Municipal Auditorium
Tuesday, May 1, 8:30 to 11 a. m.**

38. *Concealed Hypertension and "Essential" Cardiac Hypertrophy*—R. J. Lajoie, M. D., 1930 Wilshire Boulevard, Los Angeles.

The significance of determination of the average dynamic blood pressure (mean oscillometric pressure) is as yet unrecognized. Clinical hypertension and its relation to essential cardiac hypertrophy. A new syndrome is disclosed of cardiac arrhythmia as aids and orthodiagraphy of the heart and aorta as confirmation of early diagnosis. Five illustrated cases are fully detailed.

Discussion by Verne R. Mason, M. D., and Arthur S. Granger, M. D., Los Angeles.

39. *Management of Heat Prostration Cases at Boulder Dam*—R. O. Schofield, M. D., Six Companies Hospital, Boulder City, Nevada.

Considerations of the physical conditions of this locality in which this work is being done. The living conditions and difficulties encountered during the first summer of work in 1931. Care of cases at that time. Research studies at the Dam conducted by the Harvard Fatigue Laboratories in the summer of 1932. The clinical application of the results of these studies and the treatment of heat cases in the summer of 1933.

Discussion by C. Van Zwalenburg, M. D., Riverside, and Eugene S. Kilgore, M. D., San Francisco.

40. *The Problem of Obesity*—Alfred E. Koehler, M. D., 317 West Pueblo Street, Santa Barbara.

Obesity is demonstrably a condition in which caloric intake is in excess of the maintenance requirement. We have found that the maintenance requirement determined by various means varies widely from 800 to 3,000 calories with normal or subnormal basal metabolic rates. The metabolic problems of the obese group with a subnormal maintenance requirement are discussed.

Discussion by James F. Churchill, M. D., San Diego, and Fletcher B. Taylor, M. D., Oakland.

41. *The Cases of Childhood Myxedema.—Reported for the Purpose of Emphasizing the Diagnostic Importance of Bone Age Studies*—C. Kelly Canelo, M. D., 505 Medico-Dental Building, San Jose.

Two cases of childhood myxedema with severe retardation of osseous development. Case 1—A girl, age twelve years, with a bone age of six months. Case 2—A woman, age thirty-four years with a bone age of ten years. Both cases showed extremely successful response to thyroid substance. (Illustrated by lantern slides.)

Discussion by E. Kost Shelton, M. D., Santa Barbara, and Clifford A. Wright, M. D., Los Angeles.

42. *Lobar Pneumonia—An Attempt to Evaluate Various Methods of Treatment*—W. E. R. Schottstaedt, M. D., 1759 Fulton Street, Fresno.

A summary of 217 cases of lobar pneumonia occurring in the medical service of the General Hospital of Fresno County and in private practice over a four-year period.

Results of various methods of treatment are summarized and by reason of the mortality statistics preferred methods of treatment are indicated.

Discussion by Edwin Bruck, M. D., San Francisco, and Lewis Gunther, M. D., Los Angeles.



**Third Meeting—Municipal Auditorium
Wednesday, May 2, 2 to 5 p. m.**

**Joint Meeting of General Medicine and Pathology
Sections**

Symposium on Animal-Borne Diseases

43. *Undulant Fever*—John C. Ruddock, M. D., 1930 Wilshire Boulevard, Los Angeles.

A brief résumé of the history of the disease; its relation to Malta fever; the distribution of the disease in this country; etiologic factors; clinical signs and symptoms; prognosis; treatment.

Discussion by C. W. Bonyngue, M. D., Los Angeles.

44. *Relapsing Fever*—LeRoy Briggs, M. D., 384 Post Street, San Francisco.

A brief clinical review of the disease. Summary on all reported cases to date in California and Nevada. Discussion of probable vector, reservoirs of infection, and endemic foci.

Discussion by A. E. Varden, M. D., San Bernardino.

45. *Psittacosis*—James B. Luckie, M. D., Professional Building, 65 North Madison Avenue, Pasadena. Historic résumé of the disease and its etiology up to the present time. Its symptomatology and diagnosis. Complications and sequelae. A review of its treatment and prophylaxis.

Discussion by George H. Roth, M. D., Los Angeles.

46. *Tularemia*—Hiram E. Miller, M. D., 384 Post Street, San Francisco.

The clinical, bacteriological and therapeutic aspects of tularemia are reviewed. Special attention is given to the disease acquired by patients in the State of California. Diagnostic procedures and the recent therapeutic advance in the treatment of this disease are discussed.

Discussion by J. F. Kessell, Ph. D., Los Angeles.

47. *Rocky Mountain Spotted Fever—Endemic Typhus*—Edward L. Munson, M. D., Parnassus and Third Avenues, San Francisco. (By invitation.)

Rocky Mountain spotted fever and endemic typhus, with particular reference to their occurrence in California. Their etiological agents, hosts, and transmitting vectors. The distribution and activity of vectors in relation to climate and season. Their clinical picture and case mortality. Incubation, and maintenance of virus. Treatment and prophylaxis.

48. *Plague*—W. H. Kellogg, M. D., Department of Health, Berkeley.

Plague occurring in two clinical types, bubonic and pneumonic, now endemic among ground squirrels of California. One bubonic and two pneumonic outbreaks have occurred in California. The symptoms, diagnosis, mode of spread, and future outlook are discussed.

49. *Present Status of Etiology and Preventive Treatment of Rabies*—Frederick Proescher, M. D., County Hospital, San Jose.

A brief résumé of the present status of our knowledge of the etiology of rabies and the preventive anti-rabies treatment for man and animals. The pro and con for using virulent fixed virus instead of killed virus is discussed.

General symposium discussed by Karl F. Meyer, Ph. D., San Francisco.

RECESS

Election of Officers and Business Meeting



Fourth Meeting—Municipal Auditorium Thursday, May 3, 9 to 12 a. m.

50. *Silicosis and Tuberculosis*—Frank Porter Miller, 1028 Pacific Mutual Building, Los Angeles.

Phagocytic cell ingestion of dust is discussed. Dust from nasal mucous membrane downward in its course, until fibrotic nodule is the eventual end-result. Pathologic and radiographic proof is shown. Course of the disease; regulative measures, duration, and the eventual hope of recovery is thoroughly entered into.

Discussion by F. M. Pottenger, M. D., Monrovia, and Carl R. Howson, M. D., Los Angeles.

51. *Carbohydrate Intolerance and Intestinal Flora—A Clinical Study Based on Sixty Cases*—T. L. Althausen, M. D., M. A. Marshall, Ph. D., J. B. Gunnison, M. A., and S. J. Shipman, M. D., University of California Hospital, San Francisco.

A common syndrome characterized by marked flatulence and other gastro-intestinal and systemic manifestations is discussed. The conclusion is reached that increased fermentation of carbohydrates together with decreased resorption of gases from the intestine is causing this condition. A regimen affording partial to complete relief in most cases is outlined.

Discussion by William Barrows, M. D., San Diego, and Elbridge J. Best, M. D., San Francisco.

52. *Pregnancy and Diabetes*—Howard West, M. D., and Everett W. DeLong, M. D., 1930 Wilshire Boulevard, Los Angeles.

An attempt to correlate the relative importance of the history of pregnancy with other etiologic factors in a representative series of diabetic women, and the effects of pregnancy upon preëxisting diabetes. Is previous pregnancy an important factor in the steadily rising incidence of diabetes in women past the age of forty-five years?

Discussion by J. W. Sherrill, M. D., La Jolla, and H. Clare Shepardson, M. D., San Francisco.

53. *Acute Leukemia*—W. H. Leake, M. D., and Walter B. Brown, M. D., 1930 Wilshire Boulevard, Los Angeles.

A small series of cases of acute leukemia is presented. Necropsy was performed in each instance. The difficulty in classifying the type of leukemia from a routine examination of blood smears is emphasized. Certain criteria for the diagnosis of acute leukemia are mentioned.

Discussion by Gabriel Segall, M. D., Los Angeles, and Garnett Cheney, M. D., San Francisco.

54. *Amebiasis—Important Aspects of Treatment*—Hamilton H. Anderson, M. D., 350 Post Street, San Francisco.

The therapeutic effects of various drugs used in four hundred cases of amebiasis are reviewed with special reference to selection of drug, amebicidal action, tolerance to repeated doses, toxicity, and resistance to therapy. The frequency and importance of multiple family infections is emphasized. Reinfection is more important than relapse in resistant cases.

Discussion by John V. Barrow, M. D., Los Angeles, and Herbert Gunn, M. D., San Francisco.

V

GENERAL SURGERY SECTION

JOSEPH K. SWINDT, M. D., *Chairman*
546 Investment Building, Pomona

EDWIN M. TAYLOR, M. D., *Secretary*
230 Grand Avenue, Oakland

WILLIAM P. KROGER, M. D., *Assistant Secretary*.
902 Wilshire Medical Building
1930 Wilshire Boulevard, Los Angeles

First Meeting—Music Room, Mission Inn Monday, April 30, 2 to 5 p. m.

55. *Chairman's Address*—Joseph K. Swindt, M. D., Pomona.

56. *Treatment of Lung Abscess and Lung Gangrene*—Frank S. Dolley, M. D., 427 South Arden Boulevard, Los Angeles.

Developmental factors. Symptoms—both necrotic and liquefactive stages. Considerations in surgical consultation: age, condition at onset, duration, efficiency of bronchial drainage, location, course, etc. Consideration of medical and surgical measures.

57. *Chronic Cicatrizing Enteritis*—H. Glenn Bell, M. D., University of California Hospital, San Francisco.

Chronic cicatrizing enteritis is a disease of the small bowel which occurs in young adults and is characterized by areas of fibrosis and stenosis. Many cases reported in the literature are called "granuloma," "non-infectious granuloma," "inflammatory tumors of the intestines," etc.

The disease is slow but progressive in development. The treatment is surgical removal of the part affected.

Discussion by J. Homer Woolsey, M. D., Woodland, and Rea Smith, M. D., Los Angeles.

58. *Pancreatitis—Clinical Review of Sixty-Five Cases*—Harlan Shoemaker, M. D., 1014 Wilshire Medical Building, Los Angeles.

Analysis of one hundred and twenty cases. Study based on 65 per cent autopsies, and 35 per cent operative findings.

Reports of autopsy surgeon, operative surgeon, technical laboratory procedures, roentgenologists, history by the resident physician, and the progress notes of the visiting staff of physicians, add supporting evidence to diagnosis and treatment of this most hazardous disease. Carcinomas of head and tail of pancreas with pressure on common bile duct, with infiltration of lumen of common bile duct or with extension to ampullae of Vater, contribute to dysfunction of liver and to death.

Independent ducts from the pancreas, the duct of Santorini, to the duodenum associated with acute pancreatitis and almost immediate death.

Necessity of free drainage. Hyperinsulinism and associated psychic states. Absence of blood sugar reading in pancreatic disease, exclusive of diabetes, obvious upon examination of this series of cases.

59. *Complete Intestinal Obstruction—Seventy-Five Cases*—LeRoy Brooks, M. D., 490 Post Street, San Francisco.

Clinical and practical aspects of the diagnosis and treatment of acute intestinal obstructions. Discussion from the practical viewpoint and principles of treatment based upon clinical experience and recent development in biochemistry as related to this subject. Sixty-three personal cases will be briefly presented by three lantern slides, emphasizing the importance of early diagnosis and avoiding morphin preoperatively.

Discussion by George Brown, M. D., Pomona, and Junius B. Harris, M. D., Sacramento.

60. *Treatment of Burns—Analysis of One Hundred and Twenty-Five Cases*—Don D. Weaver, M. D., 400 Twenty-ninth Street, Oakland.

Treatment of burns, with a report from a series of one hundred and thirty cases treated at the Alameda County Hospital during the last three years. The advantages of the standardized method of treatment and the advantages of concentration of cases on one branch of the surgical service. Comparative study of the tannic acid treatment and other methods. (Lantern slides.)

Discussion by Wallace Dodge, M. D., Los Angeles, and L. Roscoe Chandler, M. D., San Francisco.



**Second Meeting—Music Room, Mission Inn
Tuesday, May 1, 9 to 11 a. m.**

**Joint Meeting of General Surgery and
Neuropsychiatry Sections**

61. *Differential Diagnosis of Intracranial Damage*—Edmund J. Morrissey, M. D., 909 Hyde Street, San Francisco.

Differentiation between symptoms resulting from cerebral contusion or laceration and those due to hemorrhage most essential point in treatment.

Occasionally in the same case we have not only cerebral contusion, but an extra- or intradural hemorrhage. These cases are extremely difficult to diagnose.

62. *The Management of Craniocerebral Injuries*—Carl W. Rand, M. D., 1023 Pacific Mutual Building, Los Angeles.

General outline of treatment. Discussion of dehydration methods now in vogue. Discussion of the handling of depressed skull fractures and other complications, such as interval hemorrhage, traumatic pneumocephalus, arteriovenous aneurysm, and chronic subdural hematomas. Prevention of post-traumatic states emphasized.

63. *Pathology of Brain Injury*—C. B. Courville, M. D., 1100 Mission Road, Los Angeles.

In this study a review is made of the various types of traumatic lesions of the brain, particularly those resulting from traffic accidents. Special attention is paid to the relative frequency and lethality of each lesion. The problem of cerebral edema and its relationship to symptom production is also discussed.

Discussion of the symposium by Howard C. Naffziger, M. D., San Francisco, and Samuel D. Ingham, M. D., Los Angeles, and E. B. Towne, M. D., San Francisco.

64. *Surgical Management of Spinal Cord Injuries*—Howard W. Fleming, M. D., 384 Post Street, San Francisco.

Emergency care—diagnosis of the pathology present. Indications for operative treatment. Spinal puncture and manometric estimations as an aid in the reduction of dislocations of vertebrae. Prophylactic measures to prevent the common complications.

Discussion by Mark Glaser, M. D., Los Angeles, and Frederick L. Reichert, M. D., San Francisco.

RECESS

Election of Officers and Business Meeting



**Third Meeting—Music Room, Mission Inn
Wednesday, May 2, 2 to 5 p. m.**

65. *Improvements in the Technique of Gastric Resection*—Emile Holman, M. D., Stanford Hospital, San Francisco.

Cancer of the stomach, though a curable disease, continues to head the list of deaths from malignant neoplasms. In only 25 per cent of all

cases seen is resection possible, and of these only 25 per cent can be classed as cured, *i. e.*, 6 per cent of the original cases. Paucity of early symptoms, early metastasis from a constantly contracting muscular organ, and technical difficulties, all contribute to these poor results. Subtotal gastrectomy is advocated by resection of the entire lesser curvature with its glands, the formation of a tube from the remaining portion of the cardia, and the reestablishment of continuity by an end to side anastomosis between this newly fashioned tube and the jejunum, with the latter organ lying either anterior or posterior to the transverse colon. Reasons for choice of one or the other of the two latter procedures are discussed.

Discussion by Ernst Gehrels, M. D., San Francisco, and Verne Hunt, M. D., Los Angeles.

66. *Chronic Duodenal Obstruction—Duodenal Stasis*—Burns S. Chaffee, M. D., 406 Professional Building, Long Beach.

Obstruction of the duodenum with resultant dilatation is a definite disease entity. This condition as a cause of gastro-intestinal tract symptomatology is probably frequently overlooked. May be diagnosed by clinical symptoms and roentgenologic examination. Report of case with diagnostic data and recovery following duodenoduodenostomy.

67. *Treatment of Undescended Testicle by the Torek Method*—Franklin I. Harris, M. D., 450 Sutter Street, San Francisco.

Discussion of the indications for operation differentiating between the types that may be treated by glandular therapy and those in which surgery alone would be curative. Detailed discussion of the technique of orchiopexy by the two-stage method of Torek, with discussion of end-results as compared with other operative procedures.

Study based upon thirty operative cases from the surgical service of Mount Zion Hospital, San Francisco.

Discussion by Dozier Gibbs, M. D., Los Angeles, and Asa W. Collins, M. D., San Francisco.

68. *Peritonitis and Drainage—Pathologic and Clinical Study*—George K. Rhodes, M. D., 490 Post Street, San Francisco.

Review of clinical and laboratory studies on peritonitis. The futility of draining the peritoneal cavity is emphasized. The urge to drain is probably a fetish which we hesitate to discard. The opinions of the profession vary widely, as shown by the results obtained from a questionnaire submitted to one hundred and twenty-one recognized surgeons of the Pacific Coast.

Discussion by John D. Dameron, Stockton, and Charles T. Sturgeon, M. D., Los Angeles.

69. *Mesenteric Cysts*—Charles S. Roller, M. D., Colusa. Etiology, diagnosis, classification, and pathology of this rare tumor is unsettled. The mortality is high. Complications are disastrous and often give the first symptom. A classification is presented. Three personal cases (all recovered) are reported, with history, physical and laboratory findings, diagnosis, operation done and progress. (Lantern slides.)

Discussion by E. Eric Larson, M. D., Los Angeles, and Edwin I. Bartlett, M. D., San Francisco.



**Fourth Meeting—Music Room, Mission Inn
Thursday, May 3, 9 to 12 a. m.**

70. *Suprastyloid or Colles's Fracture*—Alfred E. Gallant, M. D., 1033 Roosevelt Building, Los Angeles.

The mechanics of production and reduction: discussion of the mechanism producing supina-

tion and pronation; description of the method of reduction and postreduction fixation; inquiry into the causes of the disability following this fracture; study of the rôle played by the brachioradialis and biceps muscles; relation of this fracture to medico-legal problems which are very common today.

71. *The Prevention of Postoperative Acidosis, Shock, and Nausea—Preoperative Feeding of Glucose*—Wilson Stegeman, M. D., Knapp Hospital, Crescent City.

Twenty-five unselected non-acute surgical cases were fed large doses of glucose by mouth for eighteen hours before operation. Preoperative and immediate postoperative blood sugars were taken and checked against untreated cases. Preoperative and postoperative urines were checked for sugar and acetone. Acetonuria was completely lacking, shock was avoided, and nausea was markedly decreased.

Discussion by Charles A. Dukes, M. D., Oakland, and Irving Wills, M. D., Santa Barbara.

72. *Reconstructive Plastic and Oral Surgery*—Arthur E. Smith, M. D., 511 Wilshire Medical Building, Los Angeles.

Presenting the reconstruction of a patient with congenital deformities of the face and oral cavity; including the upper and lower lips, nose, cheeks, teeth, hard and soft palates. The detailed surgical and mechanical reconstruction technique will be illustrated by standard motion pictures, life-size model reproductions, and photographs.

73. *Cartilaginous Inclusions in Bone Following Rickets and the Possible Relationship to the Formation of Cartilage Tumors*—Paul E. MacMaster, M. D., 1930 Wilshire Boulevard, Los Angeles.

Autopsy observation and study of cartilaginous inclusions in the bones from a case of healed rickets.

The results of the clinical and experimental studies show that cartilaginous inclusions, or "islands of cartilage" are found in the spongiosa of the epiphysis, the diaphysis and the compacta in healed rickets.

There appears to be some relationship between disturbed epiphyseal cartilage growth, as in rickets, and the development of chondromata.

74. *Tetanus Complicating Abdominal Surgery*—Finis G. Cooper, M. D., 2703 Florence Avenue, Huntington Park.

A review of the literature with a report of personal cases and a report of cases at the Los Angeles General Hospital observed between 1923 and 1933. Discussion stressing the importance of prophylaxis. (Lantern slides.)

Discussion by T. C. Larson, M. D., Oakland, and William P. Kroger, M. D., Los Angeles.

parasites. A review of outstanding and frequently occurring faults which often result in disability or discouragement. Suggestions for more rational and careful procedure in this field of therapy.

Discussion by Charles LeRoy Lowman, M. D., Los Angeles, and J. Severy Hibben, M. D., Pasadena.

76. *Contused Injuries to the Peripheral Nerves, the Value of Early Surgical Treatment*—Howard A. Brown, M. D., 384 Post Street, San Francisco.

A study of thirty-four cases of contused injuries to peripheral nerves. The diagnosis, type of trauma, pathology, and results of surgical treatment are considered.

Discussion by Carl Rand, M. D., Los Angeles, and LeRoy C. Abbott, M. D., San Francisco.

77. *Backache—Injury or Disease*—Ralph Swarts, M. D., 1360 Washington Street, San Francisco.

For a number of years one insurance carrier has subjected all employees claiming back injuries to a careful diagnostic study. Instead of considering the medical cases as "back strains" and applying routine physical therapy, liability was denied. The claimants were furnished a diagnosis and told to consult their family physicians. Over seven hundred such claims, of which thirty-six were officially passed upon and denied by the Industrial Accident Commission or state courts, are reviewed and form the basis of this study.

Discussion by Verne R. Mason, M. D., Los Angeles, and Harry J. Schott, M. D., Los Angeles.

78. *Caseous Deposits About Elbow Joint Following Trauma*—William F. Holcomb, M. D., 230 Grand Avenue, Oakland. (Lantern slides.)

This paper deals with calcareous deposits about the elbow joint which have followed trauma and have been demonstrated by x-ray pictures.

There will be four case reports and slides of x-ray pictures showing these deposits with some discussion as to the nature of the deposit itself. (Lantern slides.)

Discussion by Harold Hitchcock, M. D., Oakland, and Clarence E. Rees, M. D., San Diego.

79. *Fractures in the Lower Third of the Femur*—John S. Stephens, M. D., 1136 West Sixth Street, Los Angeles.

Type of fractures in children. Type of fractures in adults. Methods of reduction and maintenance: (a) closed reduction; (b) skin traction; (c) skeletal traction; (d) open reduction. End-results.

Discussion by Samuel S. Mathews, M. D., Los Angeles, and Fraser L. Macpherson, M. D., San Diego.

RECESS

Election of Officers and Business Meeting



Second Meeting—Pilgrim Room, Congregational Church

Tuesday, May 1, 2 to 5 p. m.

80. *Urologic Complications in Fractures of the Pelvis*—Elmer Belt, M. D., 523 West Sixth Street, Los Angeles.

Urinary hemorrhage and urine extravasation from tears in urethra and bladder wall. Perivesical and periurethral hemorrhage. Seminal tract complications. Urethral obstruction from interruption of the urethra; realignment of bony and soft parts. Late results; stricture of the urethra, residual urine; sexual impotence. (Lantern slides.)

Discussion by Miley B. Wesson, M. D., San Francisco, and C. Lewis Gauden, M. D., Los Angeles.



VI

INDUSTRIAL MEDICINE AND SURGERY SECTION

JOHN J. LOUTZENHEISER, M. D., *Chairman*
350 Post Street, San Francisco

J. MINTON MEHERIN, M. D., *Secretary*
350 Post Street, San Francisco

First Meeting—Pilgrim Room,
Congregational Church

Monday, April 30, 2 to 5 p. m.

75. *Physical Therapy—Criticisms and Suggestions*—H. M. F. Behneman, M. D., 384 Post Street, San Francisco.

A résumé of the physical therapy situation in California; criticism of present methods of its practice by technicians, physicians, and medical

81. *Traumatic Dislocation of the Tendon of the Long Head of the Biceps Brachii*—LeRoy C. Abbott, M. D., 2000 Van Ness Avenue, San Francisco, John C. de C. M. Saunders, M. D., and D. W. Smith, M. D., University of California Medical School, San Francisco.

Dislocation of the tendon of the long head of the biceps, due to trauma, is of infrequent occurrence. This paper describes the clinical signs, essential points in diagnosis, and findings at operation. The importance of early diagnosis and prompt surgical treatment will be emphasized. (Illustrations.)

Discussion by J. Minton Meherin, M. D., San Francisco.

82. *Injuries to Muscles*—Ralph Soto-Hall, M. D., and Keene O. Haldeman, M. D., 350 Post Street, San Francisco.

Types of muscle injury are described with a review of the literature. A series of cases is presented which illustrate the difficulty of interpretation, and the methods of diagnosis of these injuries. A description of the unusual symptomatology resulting from rupture, partial rupture, displacement and herniation of muscles is included. A special note is made of the value of x-ray in the diagnosis of such cases. (Lantern slides.)

Discussion by Hugh Toland Jones, M. D., Los Angeles, and Edgar L. Gilcreest, M. D., San Francisco.

83. *What Price Medical-Legal Testimony*—William Louis Weber, M. D., 418 Pacific Mutual Building, Los Angeles.

The paper has to do with medical legal testimony which, after investigation, is proven to have been entirely erroneous as shown in the films.

Discussion by Joe G. Sweet, attorney-at-law, San Francisco. (By invitation.) Discussion illustrated by films.



VII

NEUROPSYCHIATRY SECTION

CLIFFORD W. MACK, M. D., *Chairman*
Livermore Sanitarium, Livermore

HELEN HOPKINS, M. D., *Vice-Chairman*
925 Pacific Mutual Building
523 West Sixth Street, Los Angeles

H. DOUGLAS EATON, M. D., *Secretary*
811 Medical Office Building
1136 West Sixth Street, Los Angeles

First Meeting—Billiard Room, Mission Inn

Monday, April 30, 2 to 5 p. m.

Symposium on Therapeutics

84. *Chairman's Address*—Clifford W. Mack, M. D., Livermore.

85. *Prophylaxis:*

- (a) *Sterilization*—F. O. Butler, M. D., Eldridge State Home, Eldridge.
(b) *Child Guidance and Mental Hygiene*—Arthur R. Timme, M. D., 801 Wilshire Medical Building, 1930 Wilshire Boulevard, Los Angeles.

86. *Advances in Treatment:*

- (a) *Drugs*—Clinton H. Thienes, M. D., University of Southern California Medical School, Los Angeles. (By invitation.)
(b) *Physiotherapy and Occupational Therapy*—Ione Pinney, M. D., Stockton State Hospital, Stockton.
(c) *Psychotherapy*—George S. Johnson, M. D., Stanford University Medical School, San Francisco.

87. *Treatment of General Paresis:*

- (a) *Drugs*—Eugene Ziskind, M. D., 718 Professional Building, 1052 West Sixth Street, Los Angeles.
(b) *Malaria*—F. J. Van Meter, M. D., Norwalk State Hospital, Norwalk.
(c) *Hyperpyrexia Other Than Malaria*—Norman N. Epstein, M. D., 450 Sutter Street, San Francisco.

RECESS

Election of Officers and Business Meeting



Second Meeting—Music Room, Mission Inn Tuesday, May 1, 9 to 11 a. m.

Joint Meeting of General Surgery with Neuropsychiatry Section

The program of this joint meeting is printed under the second meeting of the General Surgery Section. (See page 283.)



Third Meeting—Billiard Room, Mission Inn Wednesday, May 2, 2 to 5 p. m.

88. *Chronaxia—Theory, Application to Clinical Neurology, and Presentation of a Portable Chronaximeter*—Henry W. Newman, M. D., Stanford University School of Medicine, San Francisco.

The history of the evolution of the present status of chronaxia is traced from the early work of Hoorweg and Weiss, through the animal researches of Lapicque, to its application by Bourguignon to electrodiagnosis in man. Theoretical considerations are briefly dealt with, and tables of normal values, as well as the variations from the normal to be met with in disease of the nervous system are included. A detailed account of the construction of a simple, inexpensive, readily portable instrument for clinical chronaximetry is presented.

89. *Pseudo-Abscess of the Brain Secondary to Otitis Media*—J. M. Nielsen, M. D., and C. S. Courville, M. D., 1253 Roosevelt Building, 727 West Seventh Street, Los Angeles.

In a study of intracranial complications of otitis media the authors have been impressed with the frequency with which focal symptoms of the brain occur without formation of abscess. From the standpoint of the neurologist interested in diagnosis a brief abstract of the literature and citation of cases of pseudo-abscess is presented. The method of approach to a positive diagnosis is discussed.

90. *Some Clinical Aspects of Herpes Zoster*—Pearl S. Pouppirt, M. D., and Melvin R. Somers, M. D., Stanford University Hospital, San Francisco.

A series of cases of herpes zoster were treated with posterior pituitary extract. The clinical results obtained were noted and correlated with dosage and frequency of administration of the drug. The indications and contra-indications for this method of treatment are discussed together with its possible action in herpes zoster.

91. *The Surgical Treatment of the Ependymal Gliomas of the Spinal Cord*—L. J. Adelstein, M. D., and G. W. Patterson, M. D., 1930 Wilshire Boulevard, Los Angeles.

The ependymal gliomas of the spinal cord while of intramedullary origin are fairly benign in nature, well encapsulated, surgically amenable, and may be completely removed without serious permanent injury to the spinal cord. A review of the literature is presented and two cases with operation are reported.

VIII

OBSTETRICS AND GYNECOLOGY
SECTION

ALICE F. MAXWELL, M. D., *Chairman*
University of California Hospital
San Francisco

EMIL F. KRAHULIK, M. D., *Vice-Chairman*
1021 Taft Building, 1680 North Vine Street
Hollywood

HENRY A. STEPHENSON, M. D., *Secretary*
521 Medico-Dental Building, 490 Post Street
San Francisco

First Meeting—Galleria, Mission Inn

Tuesday, May 1, 9 to 11 a. m.

92. *The Relation of the Pituitary to Sex Differences in Ketosis*—B. J. Duell, M. D., Department of Biochemistry, University of Southern California School of Medicine, Los Angeles. (By invitation.)

A sex difference in extent of ketonuria developing during fasting was found to occur in normal men and women. Experimental work with sodium acetoacetate. Effect of oöphorectomy and castration on ketone body excretion. Sexual difference in ketonuria may be the result of variation in fat and carbohydrate metabolism. Ketonuria in pregnant rats.

93. *Statistical Study of the Uterine Ruptures at the Los Angeles County General Hospital from 1923 to 1934*—Lyle G. McNeile, M. D., and Raymond D. McBurney, M. D., 1021 Pacific Mutual Building, 523 West Sixth Street, Los Angeles.

Causes of uterine rupture analyzed. Comparative methods of treatment. Observation on the use of pituitary preparations before delivery. Frequency of rupture from operative delivery and after previous caesarean section. Report justifies conclusion that uterine rupture may be frequently prevented in conservative obstetrics.

94. *Clinical and Laboratory Studies on Trichomonas Vaginitis with Suggested Form of Treatment*—Henry N. Shaw, M. D., 901 Pacific Mutual Building, Los Angeles, John F. Kessel, Ph. D., University of Southern California Medical School, Los Angeles, and James A. Gafford, Jr., M. D., 6118 Santa Fe Avenue, Huntington Park.

Trichomonas vaginalis infection usually exhibits an accompanying vaginitis. Study of vaginal biopsies, bacteriologic and protozoölogic examination of exudate. Experimental work on transmission of *Trichomonas vaginalis* to animals. Various methods of therapy discussed.

95. *Breech Deliveries in the Home*—B. J. Hanley, M. D., 814 Wilshire Medical Building, 1930 Wilshire Boulevard, Los Angeles.

A résumé of the breech deliveries done on the Los Angeles City Maternity Service for a period of four years—position, type of delivery, gross and corrected infant mortality, a brief description of our technique, and a comparison of our results with those obtained in other clinic services throughout the United States.

RECESS

Election of Officers and Business Meeting



Second Meeting—Galleria, Mission Inn

Thursday, May 3, 9 to 12 a. m.

96. *Chairman's Address*—Alice F. Maxwell, M. D., San Francisco.
97. *A Critical Review of One Thousand Consecutive Deliveries in Private Practice*—Donald A. Dallas, M. D., 530 Medico-Dental Building, 490 Post Street, San Francisco.

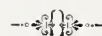
This paper deals particularly with methods of delivery and maternal and fetal mortality.

98. *The Recognition and Treatment of Ectopic Pregnancy*—J. Morris Slemons, M. D., 819 Pacific Mutual Building, Los Angeles.

The treatment of ectopic pregnancy should be surgical as soon as it is recognized. (1) Tubal rupture and abortion with introperitoneal hemorrhage urgently require immediate operation. (2) In doubtful cases of unruptured tubal pregnancy the urine hormonal test has greatly improved accuracy of diagnosis. (3) Where pregnancy is known to exist, but its location, in the uterus or elsewhere, is uncertain, the most satisfactory results are obtained by patiently awaiting the developmental changes which eventually clarify the situation.

99. *An Autopsy Study of Women Dying with Cervical Cancer After Radiation*—Daniel G. Morton, M. D., University of California Hospital, San Francisco.

Brief review of autopsy studies upon women dying of essentially untreated cervical cancer, and upon women treated by operation. Study of thirty-six autopsies upon women in whom cervical cancer was treated by radiation. Sites and frequency of metastases. The most prominent cause of death correlated with the extent of the disease at first treatment, and with the "adequacy" of radiation. Comparative results of cases adequately and inadequately treated. Attention is called to the mortality of radiation. Several cases in point are cited. Unavoidable reasons for "inadequate radiation" are given.



IX

PATHOLOGY AND BACTERIOLOGY
SECTION

GEORGE D. MANER, M. D., *Chairman*
657 South Westlake Avenue, Los Angeles

EMIL BOGEN, M. D., *Secretary*
Olive View Sanitarium, Olive View
ZERA E. BOLIN, M. D., *Assistant Secretary*
490 Post Street, San Francisco

First Meeting—Green Room, Auditorium

Monday, April 30, 2 to 5 p. m.

100. *Chairman's Address*—George D. Maner, M. D., Los Angeles.

101. *Round Table Discussion:*

(a) *Relationship of the State Board of Health to Clinical Laboratories*—W. H. Kellogg, M. D., State Hygienic Laboratories, Berkeley.

(b) *Socio-Economic Problems Confronting the Clinical Pathologist.*

Discussion by Alvin G. Foord, M. D., Pasadena; Zera E. Bolin, M. D., San Francisco; and Rawson J. Pickard, M. D., San Diego.

(c) *What the American Society for Control of Cancer Expects of the Clinical Pathologist*—John M. Flude, M. D., P. O. Box 1133, Hollywood.

RECESS

Election of Officers and Business Meeting



Second Meeting—Municipal Auditorium

Wednesday, May 2, 2 to 5 p. m.

Joint Meeting of General Medicine and Pathology and Bacteriology Sections

The program of this joint meeting is printed under the third meeting of the General Medicine Section. (See page 281.)

X

PEDIATRIC SECTION

FRANCIS S. SMYTH, M. D., *Chairman*
University of California Hospital
San Francisco

HENRY E. STAFFORD, M. D., *Secretary*
242 Moss Avenue, Oakland

SAM J. MCCLENDON, M. D., *Assistant Secretary*
2001 Fourth Street, San Diego

First Meeting—Galleria, Mission Inn
Monday, April 30, 2 to 5 p. m.

102. *The Eyes in Childhood*—Roderic O'Connor, M. D., 1904 Franklin Street, Oakland.

This paper emphasizes the importance, first, of early and thorough care of ocular muscular anomalies, especially strabismus. Second, of complete eye examinations of all children immediately before starting school work. Conditions, such as congenital cataract, and others, in order of importance, will be mentioned as the time limit permits.

Discussion by J. Randolph Sharpsteen, M. D., Oakland, and Wallace Miller, M. D., Los Angeles.

103. *Asphyxia Neonatorum*—Phillip E. Rothman, M. D., 925 Pacific Mutual Building, 523 West Sixth Street, Los Angeles.

The common causes of asphyxia neonatorum are emphasized. An attempt is made to differentiate between the types characterized by purely chemical or physiologic changes and those manifesting demonstrable organic lesions. The indications for treatment with carbon dioxid mixtures, Drinker respirator, and oxygen are discussed.

Discussion by Edward S. Babcock, Jr., M. D., Sacramento, and Guy Bliss, M. D., Long Beach.

104. *Encephalography in Children*—F. G. Lindemulder, M. D., 2001 Fourth Avenue, San Diego.

A brief review of the technique, indications and contraindications for encephalography. The value of this procedure as an aid to the clinician in the diagnosis and treatment of brain disease. A lantern slide demonstration of encephalograms in children, followed by encephalograms of adults showing the later manifestations of the childhood diseases.

Discussion by Howard Fleming, M. D., San Francisco, and Edward B. Shaw, M. D., San Francisco.

105. *Posture in Early Childhood*—C. L. Lowman, M. D., 523 West Sixth Street, Los Angeles.

Body mechanics vital to pediatric and orthopedists. Many adult deformities and disabilities preventable by remedial attention during childhood. Specific cases illustrating results of neglect of early examination and treatment of postural faults. Necessity of checking incipient deviations. Details of measuring children. Benefits for physicians and child patients in yearly check of statistics.

Discussion by Clifford Sweet, M. D., Oakland, and Alfred J. Scott, M. D., Los Angeles.

RECESS

Election of Officers and Business Meeting



Second Meeting—Galleria, Mission Inn
Wednesday, May 2, 2 to 5 p. m.

Joint Meeting of Pediatric and Nose and Throat Sections

106. *The Problem of the Common Cold*—Karl F. Meyer, Ph.D., University of California Medical School, San Francisco. (By invitation.)

To be read by Francis S. Smyth, M. D., in lieu of chairman's address.

There is considerable uncertainty whether a common cold is a specific infection or whether a number of micro-organisms can produce the syndrome. Recent investigations have followed

these lines of approach: (a) an endeavor to demonstrate the infectiousness of filtrates from the nasal washings; (b) exposure experiments on anthropoid apes; and (c) an analysis of the fluctuations in the normal bacterial flora of the upper respiratory tract of groups of persons. A critical discussion and correlation with the present-day conception of allergic rhinitis.

Discussion by Paul Michael, M. D., Oakland, and Emil Bogen, M. D., Olive View.

107. *Sinusitis in Children—Results of Surgical Therapy*—Roy F. Nelson, M. D., 400 Thirtieth Street, Oakland.

Analysis of fifty cases of surgery on sinuses of children, selected on basis of thorough pre-operative medical therapy, and at least one year postoperative observation. Results, approximately: excellent to good—focal infection, recurrent bronchitis, malnutrition, fatigability, etc.; good to fair—asthma, frequent colds; fair to poor—bronchiectasis, discharge from sinuses, nasal congestion. Bronchiectasis usually checked, seldom cured; nasal congestion and discharge showed wide range, from perfect to not improved; some asthmatics cured after allergy failed.

Discussion by Harold A. Fletcher, M. D., San Francisco, and Leland H. Hunnicutt, M. D., Pasadena.

108. *Clinical Observations on Respiratory Infections in Childhood*—Hugh Kling Berkeley, M. D., 1136 West Sixth Street, Los Angeles.

A brief presentation of the present conception of the common cold and its management in childhood. Sinus infections in childhood and the relationship between the otolaryngologist and the pediatrician.

The value of the newer methods of oxygen administration in the treatment of pneumonia.

Discussion by William Belford, M. D., San Diego, and E. P. Cook, M. D., San Jose.

109. *Blood Lipids in Acute Infections*—Irving McQuarrie, M. D., University of Minnesota, Minneapolis, Minnesota. (By invitation.)



XI

RADIOLOGY SECTION

ROBERT S. STONE, M. D., *Chairman*
University of California Hospital, San Francisco

KENNETH S. DAVIS, M. D., *Secretary*
St. Vincent's Hospital, Los Angeles.

First Meeting—Municipal Auditorium
Monday, April 30, 2 to 5 p. m.

Joint Meeting of General Medicine and Radiology Sections

The program of this joint meeting is printed under the first meeting of the General Medicine Section. (See page 280.)



Second Meeting—Green Room, Auditorium
Tuesday, May 1, 9 to 11 a. m.

Radiological Economics

110. *Chairman's Address*—Robert S. Stone, M. D., San Francisco.

111. *The Status of the Radiologist in the Hospital*—Lowell S. Goin, M. D., Chairman of the Pacific Roentgen Club, 1930 Wilshire Boulevard, Los Angeles.

This paper will contain the results of a questionnaire to determine the common practice of various hospitals in relation to the Department of Radiology, the various methods of compensating the radiologist, the degree of control exercised by the radiologist over the department, and his relationship to the staff in general.

RECESS

Election of Officers and Business Meeting

Third Meeting—Deaver Room, Auditorium

Wednesday, May 2, 2 to 5 p. m.

112. *Roentgenotherapy of Superficial Malignancies*—Henry J. Ullmann, M. D., 1520 Chapala Street, Santa Barbara.

Reasons for choosing radiation instead of other methods in the majority of cases. Palliative value in the advanced and incurable. Technique. Résumé of twelve years' experience with changes in methods. (Lantern slides.)

113. *The Treatment of Low-Grade Epidermoid Carcinomas by Radium Needles*—Orville N. Meland, M. D., 1407 South Hope Street, Los Angeles.

This paper is a study of the effects of radium on "radio-resistant" epidermoid carcinomas. The term "radio-resistant," based on histological appearance of the cells, is misleading. These tumors, though they are easily curable surgically, may also be treated by radium with success when the proper technique is used. Therefore it is justifiable to resort to radium in lesions of this type in patients where a surgical operation would be hazardous, especially in the aged.

Discussion of the above papers by Edward Leef, M. D., San Francisco.

114. *Malacic Diseases of Bone*—John Dexter Camp, M. D., Mayo Clinic, Rochester, Minnesota.

This paper will review the significant roentgenographic data concerning the so-called malacic bone diseases. A satisfactory classification of these conditions is difficult because the etiology in many instances is unknown or uncertain. For practical consideration the following classification may be used, although it is realized that it is far from adequate and subject to revision: (1) Disturbances due to some congenital or inherited defect, *i. e.*, osteogenesis imperfecta, fragilitas ossium; (2) Disturbances due to vitamin deficiency, *i. e.*, rickets, osteomalacia, scurvy; (3) Disturbances due to endocrine malfunction, *i. e.*, hyperparathyroidism, hyperthyroidism, basophilism, diabetes, etc.; (4) Diseases of the reticulo-endothelial and vascular system, *i. e.*, Goucher's disease, Schuller-Christian's disease, Niemann-Pick disease, congenital anemias, and certain other blood dyscrasias of infants and adults.

Because of the current interest in hyperparathyroidism the roentgenographic characteristics of this disease will be discussed in detail and a differential diagnosis of other conditions that have been confounded with it will be presented.

Discussion by Charles M. Richards, M. D., San Jose.

115. *Spontaneous Pneumothorax in the New-Born*—Milton J. Geyman, M. D., and Daniel M. Clark, M. D., 1520 Chapala Street, Santa Barbara.

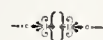
Spontaneous pneumothorax is rarely seen before the second year of life. It may be caused by birth trauma, mechanical bronchial obstruction, infection, and as a result of congenital defects. Death may follow as a result of respiratory embarrassment, but some cases survive with or without persistence of the pneumothorax. Withdrawal of air usually results in temporary relief and in some instances has apparently resulted in permanent cure of the condition. Two cases are reported.

Discussion by Rolla G. Karshner, M. D., Los Angeles.

116. *The Roentgen Evidence of Right Heart Involvement*—Ray A. Carter, M. D., 1100 Mission Road, Los Angeles.

Strain upon the right heart occurs from various conditions, including acquired valvular lesions, congenital anomalies and extra-cardiac obstructions of the pulmonary circulation. These may produce more or less characteristic

changes in the cardiac silhouette and measurements. These changes may be simulated or modified by various conditions having no effect upon the right heart.



XII

UROLOGY SECTION

LEWIS MICHELSON, M. D., *Chairman*
434 Medico-Dental Building
490 Post Street, San Francisco

GEORGE F. SCHENCK, M. D., *Secretary*
308 Wilshire Medical Building
1930 Wilshire Boulevard, Los Angeles

First Meeting—Deaver Room, Auditorium

Monday, April 30, 2 to 5 p. m.

117. *Chairman's Address—The Future Rôle of Urology in Medicine*—Lewis Michelson, M. D., San Francisco.

118. *Nephrotomy—When Indicated—Its Limitations and the Terminal Results*—Elmer Hess, M. D., Erie, Pennsylvania. (By invitation.)

Discussion by Frank Hinman, M. D., San Francisco, and J. C. Negley, M. D., Los Angeles.

119. *Nephrolithiasis Following Trauma*—A. J. Scholl, M. D., 721 Pacific Mutual Building, 523 West Sixth Street, Los Angeles.

This paper brings up the general question of kidney calculi from traumatism. The direct formation of stones following definite injury to the kidneys is contrasted with the occurrence of stones developing secondary to spinal injuries, urinary stasis, and infection. A case of direct formation of stones is reported.

Discussion by H. A. Fowler, M. D., Washington, D. C., and Lionel Player, M. D., San Francisco.

120. *Congenital Hypoplasia and Secondary Atrophy of the Kidney*—Clark M. Johnson, M. D., 603 Fitzhugh Building, 384 Post Street, San Francisco.

Discussion of the clinical importance of the so-called infantile kidney. Difficulties of differentiating the congenital from the acquired condition and a presentation of the chief differentiation features, both clinical and pathological. Treatment. Presentation of group of both types of cases.

Discussion by B. H. Hager, M. D., Los Angeles, and B. W. Wright, Los Angeles.

121. *Primary Carcinoma of the Ureter*—Charles P. Mathé, M. D., 450 Sutter Street, San Francisco, and Emelio de la Peña. (By invitation.)

Deals with the report of a case which was diagnosed and treated surgically. Review of the different pathological types. Enumeration of signs by which one can recognize this elusive and rare clinical entity by cystoscopic study. Treatment.

Discussion by Roger W. Barnes, M. D., Los Angeles, and A. Elmer Belt, M. D., Los Angeles.

RECESS

Election of Officers and Business Meeting
Nominating Committee: Wm. E. Stevens, George W. Hartman and J. C. Negley.

Second Meeting—Pilgrim Room,
Congregational Church

Tuesday, May 1, 9 to 11 a. m.

122. *Prostatic Disorders of Middle Life*—Wirt Bradley Dakin, M. D., 605 Chapman Building, Los Angeles.

Erroneous public opinions concerning the prostate. Etiology of various prostatic dis-

orders. Genital, urinary, and general symptoms. Additional valuable information from general examination. Patients' opinion of usual prostatic examination. Best results from gentle touch in examination and treatment. Treatment: (a) Good surgical principles in management of prostatic disorders. (b) Selection and use of a few drugs and instruments. Prognosis.

Discussion by William E. Stevens, M. D., San Francisco, and Sidney Olsen, M. D., San Francisco.

123. *The Prostatic Problem from the Standpoint of Pathology*—James R. Dillon, M. D., 301 Medico-Dental Building, San Francisco, and J. B. McNaught, M. D., Stanford Hospital, San Francisco.

Suprapubic and perineal prostatectomies have made their greatest advances in the last fifteen years by perfecting the technique of en masse enucleation. Study of prostatic hyperplasia and the true pathological significance of en masse enucleation. Question as to how and when the resectoscope will attain this same result. (Lantern slides.)

Discussion by Elmer Hess, M. D., Erie, Pennsylvania, and Jay J. Crane, M. D., Los Angeles.

124. *Comparative Evaluation of the Technical Procedures for Relief of Prostatism*—Robert V. Day, M. D., 1930 Wilshire Boulevard, Los Angeles.

Consideration of the punch operation and transurethral prostatic resection with the so-called radio loop. Comparison of the end-results and operative risks of these methods with those of the operations of supra-pubic and perineal prostatectomy. The reasonable outlook for the future of prostatic surgery.

Discussion by H. W. E. Walther, M. D., New Orleans, Louisiana, and A. B. Cecil, M. D., Los Angeles.

125. *A Résumé of the Treatment for Urethral Strictures*—W. B. Parker, M. D., and Chester H. MacKay, M. D., 527 West Seventh Street, Los Angeles.

Diagnostic methods. Time elements in development of urethral strictures. Incidence of location of urethral strictures in male and female. Surgical and non-surgical relief necessary in private and institutional practice. Brief recapitulation of selected cases from experience supporting preceding observation. Value of bibliography and current literature. Conclusion of results.

Discussion by A. M. Meads, M. D., Oakland, and H. A. R. Kreutzmann, M. D., San Francisco.

126. *Personal Values and Urology*—Edward W. Beach, M. D., 306 Medico-Dental Building, Sacramento.

Because the urologist's office is a veritable Mecca for human oddities, "border-line dwellers," matroids and amorphous "neuros," a better understanding of personal values seems mandatory. This knowledge enables the physician to differentiate psychic and somatic phenomena, to effect correlation and to properly interpret each. This essay points out the intimate connection between discordancy in the personality and the sexual expression. The latter is not only dependent upon the former, but serves as a sort of index to the degree of discordancy.

Personality is viewed as to (1) its biophysical endowment; (2) its causality aspects; and (3) its teleological proclivities. All these equations must be considered collectively and individually to cope with this enigmatic problem. Discussion by Cecil Reynolds, M. D., Los Angeles, and D. V. Vecki, M. D., San Francisco.

XIII

CANCER COMMISSION PROGRAM

Riverside Annual Session

Sunday, April 29

The Cancer Commission is sponsoring two conferences at the California Medical Association meeting to be held at Riverside this year. These conferences will take place on Sunday, April 29, and it is planned to begin them promptly at 10:30 in the morning. One will be devoted to radiology problems, whereas the other will be strictly pathological in its scope.

These two groups meet as independent units in the morning, and during the first part of the afternoon. At three o'clock the two groups will get together and discuss diagnostic problems that are of interest to both.

On account of space and material limitations it will be impossible to accommodate more than forty members at the pathology conference and sixty at the radiology conference, and reservations will be made in the order of requests received.

Those wishing to attend must make reservations in advance with one of the following men:

Dr. Alvin G. Foord, Pasadena Hospital, Pasadena, chairman of the pathology conference; Dr. Kenneth Davis, St. Vincent's Hospital, Los Angeles, chairman of the radiology conference; or Dr. Orville N. Meland, 1407 South Hope Street, Los Angeles, secretary for Southern California, of the Cancer Commission.

Please do not reserve place unless you expect to occupy it throughout the day. For the pathology conference a limited number of microscopes will be available, but if you can bring your own, please do so.

Following are tentative programs for the conferences:

Conference on Pathology

April 29, 10:30 a. m.

- 10:30 a.m.—Kidney Tumors in Children—Clarence M. Hyland.
- 11:00 a.m.—Malignant Tumor—Vernon Andrews.
- 11:30 a.m.—Bone Tumor—Ludwig Lindberg.
- 12:00 noon—Tumors of Neck—Paul Michael.
- One hour intermission for lunch.
- 1:30 p.m.—Tumors of Neck—David A. Wood.
- 2:00 p.m.—Malignant Tumor of Lung—Ernest Hall.
- 2:30 p.m.—Tumors of Bone Marrow—T. S. Kimball.

Conference on Radiology

April 29, 10:30 a. m.

- 10:30 a.m.—Chest Cases—C. W. McClanahan, Charles T. Richards.
- 11:10 a.m.—Stomach Cases—Daniel Clark, Richard Taylor.
- 11:50 a.m.—Colon Cases—Addison E. Elliott, L. H. Garland.
- 12:30 p.m.—Bone Cases—Lowell Goin, A. C. Siefert.
- Interesting cases for individual demonstration at view-boxes—C. C. Owen, Paul F. Thuresson, Forrest C. Swearingen, Clayton Johnson, John W. Crossan.

Joint Radiology and Pathology Conference

April 29, 3 to 5 p. m.

- 3:00 p.m.—Bone Tumor—Radiology, Robert Stone; Pathology, Edwin I. Bartlett.
- General discussion for five minutes.
- 3:35 p.m.—Bone Tumor—Radiology, Henry Snure; Pathology, George Maner.
- General discussion for five minutes.
- 4:10 p.m.—Bone Tumor—Radiology, Kenneth Davis; Pathology, Ernest Hall.
- General discussion for five minutes.
- 4:45 p.m.—Stomach Tumor—Radiology, Carl Parker; Pathology, Alvin G. Foord.
- General discussion for five minutes.

PRE-CONVENTION BULLETIN

Section 3 of Article XII of the California Medical Association Constitution states in part: "The Association, prior to the annual session, shall print a 'Pre-Convention Bulletin,' which shall contain reports of officers and committees. . . . A copy of the 'Pre-Convention Bulletin' shall be given to each delegate and alternate, on or before registration."

REPORTS OF GENERAL OFFICERS

REPORT OF THE PRESIDENT

To the House of Delegates:

During this year of economic stress your president has found many problems of interest, many opportunities to meet the splendid men in our profession, and opportunities to participate in events which have caused him much pleasure and satisfaction. All those with whom he has worked have been earnest and open-minded in their efforts to find a solution to the problems as they arose, even though they are not all settled as yet.

I had the pleasure of addressing the Santa Clara society at a joint meeting with the County Social Workers' Club and the Public Health Nurses' Association; the Fresno County Medical Society, the Supervisors, and social workers; the Sonoma County society; a joint meeting of the Napa and Solano county societies; the Harbor Branch of the Los Angeles County Medical Society, the Health Section of the California League of Municipalities; the Woman's Auxiliary of the Alameda County society; and the graduating class of the medical department of the University of California. In all these meetings I stressed the importance of organization work, legislation—which again will be a problem within a very few months—and medical economics. Everywhere I found a keen interest among the members to assist in solving the problem of an adequate, efficient and satisfactory medical service. A conference was held in Chicago with the officers of the American Medical Association with this thought in mind.

The year has been filled with interesting experiences, and though dark clouds have often hovered over us the sun has broken through at last.

Respectfully submitted,

George G. Reinle, *President*.

REPORT OF PRESIDENT-ELECT

To the President and the House of Delegates:

During this year I have attended all the meetings of the Council, Executive Committee, and the Public Relations Committee (except the last meeting of the Public Relations Committee) of the California State Medical Association, to acquaint myself thoroughly with all the questions pertaining to the interests of the Association and its members.

I have found this year to be most interesting and instructive, and feel that what I have gained will be of great benefit to me this coming year.

All activities of the California State Medical Association and its officers have been entirely for the benefit of the members of the California State Medical Association and, through them, to the public.

It is my hope that the members of the Association fully appreciate the efforts of the executive staff and that they will lend their aid toward the solution of all problems that may come up for decision or action.

It is the desire of the president, the Council, and all active committees to help solve the many questions that are presented by any member of the California State Medical Association.

This year, to date, many proposed problems have been definitely solved by the president and his Council, while others are at this time being thoroughly studied.

Respectfully submitted,

Clarence G. Toland, *President-Elect*.

REPORT OF THE SPEAKER OF THE HOUSE OF DELEGATES

To the President and the House of Delegates:

The Speaker of the House of Delegates announces the personnel of the following committees:

Credentials Committee—Lemuel P. Adams, Oakland; Charles T. Sturgeon, Los Angeles; R. A. Cushman, Talmadge.

Reference Committee on Reports of Officers and of Standing Committees—Alson R. Kilgore, San Francisco; E. Eric Larson, Los Angeles; W. H. Barrow, San Diego.

Reference Committee on Resolutions and on New and Miscellaneous Business—William R. Molony, Sr., Los Angeles; Phil Gilman, San Francisco; F. H. Scatena, Sacramento.

The Speaker desires to thank the members of the House for their cordial cooperation in the past.

The House of Delegates will meet on Monday and Wednesday evenings promptly at eight o'clock. All resolutions to come before the House must be presented at the meeting on Monday evening.

Respectfully submitted,

Edward M. Palette, *Speaker*.

REPORT OF SECRETARY-TREASURER

To the President and the House of Delegates:

The necessity for a detailed statement from the Association Secretary of membership and finances is greatly lessened since the auditor's report is published yearly.

Four thousand and seventy-two active, and associate members paid dues for 1933. If fifty-seven retired and fourteen honorary members are added, the total membership reaches 5,043 as against the total of 5,035 for 1932, a gain of eight members. Since the first of January forty-two payments for 1933 have been received, but these cannot be added for comparison.

The payment of dues for 1934 has been surprisingly prompt. The San Joaquin County Society on March 15 had but three payments lacking out of a membership of seventy-seven; Mendocino Society had but one; Placer Society but three. In all, 3,715 members were in good standing fifteen days before the final date of delinquency.

The auditor's report will show a smaller gain for 1933 than for any preceding year of the last decade. The carrying out of the instructions of the House of Delegates in the matter of the corporate practice of medicine and health insurance has involved a certain expenditure less, however, than was at the time considered probable. These activities have lowered the savings to \$98.96 for the year. The total gain of \$3,034.55 shown in the auditor's profit and loss statement includes the interest on the moneys that the California Medical Association has allocated to The Trustees Of the California Medical Association. The JOURNAL loss for 1933, amounting to \$3,235.56, is some \$2,200 less than for 1932. The small saving of the Association, added to the interest allocated from the funds of the Trustees, offsets the JOURNAL loss in large measure, and this year the California Medical Association was but \$211.01 in the red.

The report of the chairman of the Council and that of the Association's legal counsel presented to the

House of Delegates will show the work undertaken and accomplished during the fiscal year and will easily explain the reason the assessment of \$10 has for the first time in eleven years not completely covered expenditures.

The recommendations made by the Committee on Survey of Activities and Expenditures of the Association have been put into effect, though savings so effected in some instances do not show on the 1933 financial statement.

The annual prize award of \$300 and the publication of the directory have been discontinued, but both savings are effective after January 1, 1934.

The JOURNAL expenditures for 1933 were \$5,570.30 less than for 1932. The cost of publication diminished \$3,337.11; advertising commissions, due, unfortunately, to decreased advertising, dropped \$500, and the salary budget decreased \$1,200.

The consolidation of the offices of the Association and the Department of Public Relations was made possible only on March 1 of 1934 by removal of an adjoining tenant, and under a new lease the rental savings of the two offices will amount to \$1,122 a year. This, however, will not show until next year's audit.

The work of the Department of Public Relations and the Cancer Commission was recommended to be handled by one assistant. The assistant selected was unable to continue her work and as it was deemed advisable to have an assistant familiar with the work of the main office, Miss Mickle was temporarily transferred. Pending decision regarding her acceptance to the Department of Public Relations, the three remaining assistants asked that they divide and assume her former duties. There was considerable question in the mind of your secretary regarding the wisdom of adding this extra work to that already carried. There still is some question, but their expressed wish to try the plan prevailed, and the energy, capability and willingness of all have so far tided over all rush periods. Whether three should carry the entire load indefinitely remains to be seen. This effected a savings for the Department of Public Relations of \$1,500 a year and for the Association and the JOURNAL, \$600 each, or a total savings of \$2,700.

The reductions effected by the carrying out of the various recommendations of the Committee on Survey of Activities and Expenditures of the Association therefore totals almost \$10,000 and should be plainly reflected in the auditor's report presented at the 1935 meeting.

The Placement Bureau has been of service to a limited number of physicians and stenographers. No calls for technicians have been received this past year. Positions as ships' doctors and in C. C. C. camps outnumbered other calls for 1933. With return to more normal business activities, calls from industrial plants should be received this coming year.

It is with sincere pleasure that I again express my gratitude to component county officers. Their accurate accounts, conscientious reports of dues, their prompt replies to letters, lighten and hearten the work of the state office, and the desire of the State Secretary and her assistants to return in full measure the generous service accorded.

REPORT OF THE TREASURER

The system of bookkeeping inaugurated early in 1932 by Mr. Hugh Ross has clarified the financial statement of the Association greatly. A general review of the appended audit shows a balance sheet and three profit and loss divisions, one of the accounts of the California Medical Association, one of the JOURNAL of the California Medical Association, and one of the funds transferred by the California Medical Association to the corporation Trustees Of The California Medical Association. Included with the 1933 audit are ten schedules that give itemized information on expenses of the Association Division; (a) general office expense; expenses of (b) legal department; (c) of annual meeting; (d) of the Council; (e) of various committees; (f) Department of Public Relations. Detailed

information is appended to the statement of CALIFORNIA AND WESTERN MEDICINE, itemizing, respectively, JOURNAL subscriptions, production and distribution costs of JOURNAL, and general and clerical expenses. Full information wanted on costs of any item can, through these appended schedules, now be found.

This financial statement, as audited and certified by Mr. Hugh Ross, is submitted as the report of the treasurer.

Respectfully submitted,
Emma W. Pope, *Secretary-Treasurer.*

Financial Report for Calendar Year 1933.

Balance Sheet

DECEMBER 31, 1933

ASSETS

Cash	\$28,695.54
Accounts receivable:	
Advertisers in Journal	\$ 4,835.00
Trustees California Medical Association 1933 interest	2,925.59
Deposit United States Post Office.....	75.00
Miscellaneous	27.60
	7,863.19
Deferred charges:	
Rent paid in advance.....	345.00
Office equipment:	
Cost	6,437.20
Depreciation	2,715.75
	3,721.45
	\$40,625.18

LIABILITIES

Accounts payable:	
Miscellaneous	452.61
Deferred income:	
Dues collected in advance.....	265.00
Reserve fund:	
Herzstein Bequest	2,093.32
	2,810.93

NET

Surplus	\$113,244.60
Less transferred to "Trustees Of The California Medical Association".....	75,430.35
	37,814.25
	\$40,625.18

DETAIL

CASH

DECEMBER 31, 1933

Wells Fargo Bank & Union Trust Co.	
Current account	\$ 720.91
Revolving funds:	
Salary	\$ 1,300.00
General	1,000.00
Petty cash	50.00
	2,350.00
Savings' accounts:	
Anglo California National Bank.....	13,569.42
Security First National Bank of Los Angeles	11,846.18
Wells Fargo Bank & Union Trust Co.	209.03
	25,624.63
	\$ 28,695.54

DETAIL OF SURPLUS

January 1, opening balance.....	\$113,455.61
Gain or loss for year:	
Association	Gain 3,024.55
Journal	Loss 3,235.56
Loss	211.01
	113,244.60
Less transferred to "Trustees Of The California Medical Association".....	75,430.35
	\$ 37,814.25

SUMMARY OF EARNINGS

Year	Association Gain	Journal Loss	Trustees Gain	Total Gain
1933	\$3,024.55	\$3,235.56	\$406.88	\$195.87

DETAIL OF COUNTY SOCIETY DUES				
Year	Term	Rate	Mem- bers	Amount
1933	Active members	\$10.00	4,853	\$48,530.00
1933	Active members (half year)....	5.00	114	570.00
1933	Associate members	5.00	4	20.00
1933	Associate members (half year)	2.50	1	2.50
			4,972	\$49,122.50
Dues collected for prior year:				
1933	Active members	10.00	13	130.00
				\$49,252.50

I. Association Division—Profit and Loss			
Number of members.....		4,972	
INCOME		Amount	Per Member
County society dues.....		\$49,252.50	\$9.91
Less allocated to Journal 1/5		9,850.50	1.98
Appropriation from Trustees:		\$39,402.00	\$7.93
Interest for year 1933.....		\$ 2,925.59	\$.57
Other income:			
Interest		\$1,058.80	
Exhibits at annual meeting		1,090.00	
Services to Medical Society		600.00	
Addressograph revenue		44.99	
		\$ 2,793.79	\$.56
Total income		\$45,121.38	\$9.06
EXPENSE			
Sch.			
A. General expense		\$13,080.99	\$2.63
B. Legal department		4,202.76	.85
C. Annual meeting expense..		2,731.87	.55
D. Council expense		1,039.71	.21
E. Committees' expenses		9,190.24	1.85
F. Department of Public Re- lations		8,051.02	1.62
Delegates to American Medi- cal Association convention		756.43	.15
Directory of members.....		274.81	.05
Subscriptions:			
Lane Medical Library.....		\$1,209.50	
Barlow Medical Library.....		1,209.50	
		2,419.00	.48
Women's Auxiliary		350.00	.07
Total expense.....		\$42,096.83	\$8.46

SCHEDULE OF EXPENSES			
ASSOCIATION DIVISION			
GENERAL EXPENSE			
Salaries:			
Secretary		\$4,000.00	
Clerical		3,900.04	
			\$ 7,900.04
Taxes:			
Federal tax on checks.....		15.45	
San Francisco personal property.....		43.13	
			58.58
Rent		2,044.00	
Postage		325.49	
Telephone and telegrams		466.93	
Office:			
Supplies		700.87	
Expense		271.75	
Sundry		674.41	
Depreciation office equipment.....		638.92	
			2,285.95
			\$13,080.99
LEGAL DEPARTMENT			
General counsel:			
Retainer		\$ 4,000.00	
Legal fees and expenses.....		185.76	
Supplies		17.00	
			\$ 4,202.76

ANNUAL MEETING EXPENSE		
Badges		189.46
Installation		71.82
Invited guests		705.52
Hotel and entertainment		993.23
Printing, stationery and sundry.....		771.84
		\$ 2,731.87
COUNCIL EXPENSE		
Transportation		991.98
Sundry		47.73
		\$ 1,039.71
COMMITTEES' EXPENSES		
Executive Committee:		
Transportation		\$ 136.95
Public Policy and Legislation:		
Expense		2,191.26
Public Relations Committee:		
Transportation		\$ 460.51
Expense (extra legal)		4,700.41
		5,160.92
Cancer Commission:		
Salaries, clerical		550.00
Rent		150.00
Postage		116.42
Telephone and telegrams.....		14.48
Office supplies		173.82
Office expense		4.16
Sundry expense		12.60
Transportation		15.50
		1,036.98
Clinical and research prizes:		
Clinical prize		150.00
Research prize		150.00
Framing and lettering		7.50
Reprints of prize papers.....		20.25
		327.75
Scientific section:		
Stationery for twelve sections.....		70.12
Others:		
Scientific work committee.....		154.49
Physical Therapy Committee.....		111.77
		266.26
		\$ 9,190.24
DEPARTMENT OF PUBLIC RELATIONS		
Salaries:		
Director		4,800.00
Clerical		1,400.00
		6,200.00
Rent		1,020.00
Postage		59.40
Telephone and telegrams.....		139.55
Office expense:		
Supplies		153.76
Expense		56.15
Sundry		46.60
		256.51
February bulletin: 6,500 copies.....		227.31
Transportation		148.25
		\$ 8,051.02

II. Journal Division—Profit and Loss			
Number of copies issued.....		65,065	
INCOME		Amount	Per Copy
Advertising		\$22,842.88	35.10c
Subscriptions (See detail).....		11,137.89	17.12
Sale of review books.....		180.00	.28
Total income		\$34,160.77	52.50c
EXPENSE			
Journal:			
Production (See detail).....		\$20,924.01	
Distribution (See detail).....		2,095.52	
			23,019.53
Selling expense:			35.38
Advertising commission		\$ 3,621.26	
Collection expense and disc.		103.84	
Advertising		12.00	
			3,737.10
			5.74

Promotion:			
Journals furnished to:			
Advertisers	306.00		
Exchange Journal	351.00		
Complimentary	168.00		
		825.00	1.27
General expense (See detail)....	9,689.20	14.89	
Bad debts	125.50	.19	
Total expense	\$37,396.33	57.47c	
NET			
Loss for year	\$-3,235.56	-4.97c	

DETAIL OF INCOME AND EXPENSE

SUBSCRIPTIONS	
County Society dues allocated.....	\$ 9,850.56
Nevada Medical Association.....	106.00
Cash sales	356.39
Journals to advertisers.....	306.00
Journals to others.....	519.00
	\$11,137.89

JOURNAL PRODUCTION

Cost	\$19,672.40
Proof changes	750.00
Illustrations	501.61
	\$20,924.01

JOURNAL DISTRIBUTION

Correcting mailing list.....	\$ 720.00
Wrappers	292.00
Postage prepaid	1,083.52
	\$ 2,095.52

GENERAL EXPENSE

Salaries:	
Editorial	\$4,000.00
Clerical	3,799.96
	\$ 7,799.96
Rent	1,020.00
Postage	452.34
Telephone and telegrams.....	120.82
Office expense:	
Supplies	\$ 205.03
Expense	90.35
Sundry	.70
	296.08
	\$ 9,689.20

III. Trustees of the California Medical Association
Balance Sheet

DECEMBER 31, 1933

ASSETS

Cash, savings accounts:	
Bank of America, Hum- boldt Branch	\$ 3,366.89
Crocker First Federal Trust Co.	13,361.49
The San Francisco Bank..	14,856.22
	\$31,584.60
Bonds:	
Liberty 4-4¼	\$22,000.00
Liberty 4-4¼	2,000.00
Treasury 4% 1944-54	25,000.00
Treasury 3¼% 1943-5	2,000.00
	49,010.63
	\$80,595.23

LIABILITIES

California Medical Associa- tion:	
Interest for 1933.....	\$ 2,925.59
NET	
Surplus paid in:	
California Medical Asso- ciation	75,430.35
Surplus from earnings:	
January 1, 1933.....	\$ 1,832.41
Appropriated 1933	406.88
December 31	2,239.29
	\$80,595.23

PROFIT AND LOSS

INCOME

Interest on bonds and savings accounts 1933.....	\$2,925.59
Bond interest 1932 collected 1933.....	500.00
Gain derived from conversion of \$2,000 Liberty Bonds	14.38
Total income	\$3,439.97

EXPENSE

Surety bonds for secretary and president.....	\$ 50.00
Rent safe deposit box.....	5.50
Notary	2.00
Audit	50.00
Total expense	\$ 107.50

NET

Gain for year	\$3,332.47
Appropriated to:	
California Medical Association.....	
Interest for 1933	2,925.59
Balance to surplus.....	\$ 406.88

IV. Herzstein Bequest

For Suppression of Quackery in the Practice of Medicine

RECEIPTS

July, 1929	Cash	\$ 941.20
July, 1930	Cash	746.58
Dec., 1930	Interest earned by fund	65.78
July, 1931	Cash	842.30
Dec., 1931	Interest earned by fund	76.12
July, 1932	Cash	849.88
Dec., 1932	Interest earned by fund	89.80
July, 1933	Cash	726.53
Dec., 1933	Interest earned by fund	69.64
		\$4,407.83

PAYMENTS

1932	Public health exhibits	\$1,072.31
1933	Public health exhibits	950.54
1933	Publicity articles	291.66
		2,314.51

NET

December 31, 1933	Balance in fund.....	\$2,093.32
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San Francisco, California,
February 19, 1934.

I have audited the books of account and records of the California Medical Association for the year 1933, and hereby certify that the foregoing balance sheet and relative profit and loss accounts and statements attached hereto exhibit a true record of the financial affairs of the association for the year.
HUGH ROSS.

REPORT OF THE EDITOR

To the President and the House of Delegates:

The editor's report on papers received, printed, awaiting publication, and declined, is as follows:

(a) Report on annual session papers of 1933—Del Monte session.

At the Del Monte annual session (year 1933), a total of 130 papers were read before the general meetings and different sections. A summary of the disposition of the papers read at last year's annual session is as follows:

Del Monte annual session papers published in 1933.....	28
Del Monte annual session papers published in 1934.....	21
Del Monte annual session papers read (but published elsewhere, declined, or not sent in).....	72
Del Monte annual session papers in CALIFORNIA AND WESTERN MEDICINE files still awaiting publication (annual session papers in this April issue still to be deducted)	9

Total annual session papers read at Del Monte were

(b) Report on all special articles which have been printed in "California and Western Melicine" during the period April, 1933 to April, 1934 issues, inclusive.

Special and original articles which were published in CALIFORNIA AND WESTERN MEDICINE during the past year (April, 1933 to April, 1934, inclusive) are as follows:

Section papers from 1932 annual session (Pasadena session)	28
Section papers from 1933 annual session (Del Monte session)	42
California Medical Association prize papers (Del Monte session)	2

Papers read before general session (Del Monte session)	7
Lure of Medical History articles.....	12
Papers from Nevada State Medical Association meetings	5
Papers read before county and other medical societies	9
Papers accepted from miscellaneous sources (original articles, abstracts of speeches, reprints from other publications, etc.).....	25
Clinical Notes and Case Reports.....	50
Editorials	46
Editorial Comment articles.....	31
Bedside Medicine symposia.....	12

Total papers published during past year.....269

(c) *Report on manuscripts in "California and Western Medicine" files and awaiting publication.*

CALIFORNIA AND WESTERN MEDICINE has on hand manuscripts which have been accepted and which are awaiting publication in issues of April, 1934, and later.

Unpublished papers from 1933 annual session (Del Monte session)	9
Unpublished papers read before county and other societies	6
Unpublished papers not read before other societies.....	8
Lure of Medical History articles.....	4
Clinical Notes and Case Reports.....	16
Editorial Comment articles.....	10
Bedside Medicine symposia.....	3

Total manuscripts on hand awaiting publication..... 56

(d) *Report on non-annual session papers submitted.*

A total of forty-six papers from county societies and other sources which were submitted for publication in CALIFORNIA AND WESTERN MEDICINE this past year (April, 1933 to April, 1934, inclusive) could not be accepted for various and special reasons:

Non-annual session papers submitted, but declined..... 46

A comparison of the above report, with that presented at last year's Del Monte session, shows that at the end of the present fiscal year it has been possible to materially reduce the number of unpublished papers carried over from the previous annual session. (Last year there were thirty-one unpublished annual session papers, and this year there are only nine of such; although the total number of annual session papers read and not accepted or printed elsewhere was about the same.)

As regards the finances of the official journal, the income from the advertising pages is very much below that of the prosperity years prior to 1929. However, the report of the Association Treasurer shows a material reduction in the net loss, as compared with the year 1932. A new advertising representative has been appointed for Southern California and it is hoped that the coming year will show a substantial increase in the advertising income. Members can aid the official journal of the Association by patronizing the advertisers and mentioning CALIFORNIA AND WESTERN MEDICINE, and also by referring the names of prospective advertisers to one of the advertising representatives.

The editor is under obligation to the many members of the Association who have so generously responded when called on for discussion of papers or special reports or comments. A constant effort has been made to present to the readers of the official journal the important work and activities of the Association. Naturally, nowadays, with problems in medical economics in such a constant state of flux, it has not been possible, nor has it been desirable, to discuss the many activities of the executive officers and Public Relations Committee in the pages of CALIFORNIA AND WESTERN MEDICINE. Such topics will be presented to the House of Delegates at the Riverside annual session.

A cordial invitation is extended to all readers to contribute to CALIFORNIA AND WESTERN MEDICINE, with the hope that its pages will continue to contain material so arranged and presented as to be attractive to the members of the California Medical Association.

Respectfully submitted,

George H. Kress, *Editor.*

REPORTS OF DISTRICT COUNCILORS

FIRST COUNCILOR DISTRICT

San Diego, Riverside, Orange, and Imperial Counties

To the President and the House of Delegates:

The councilor of the First District has attended all meetings of the Council and has made one or more visits to each society in the district.

All the societies in the district have maintained a satisfactory membership both as to quantity and quality. Active efforts have been instituted looking toward the enrollment of every qualified, desirable physician in the district, with good success, and lapses in membership have been few.

The scientific programs have been excellent, and it is difficult to understand how any doctor of medicine can refrain from taking advantage of such opportunities for professional improvement. Medical economics, in its various ramifications, has been much studied and debated in this district. The conclusions in these societies have been distinctly adverse to insurance medicine either by lay or professional group organization. The intolerable burden of charity cases, both in clinics and private practice, has received intensive study. At this time the Los Angeles County plan of decentralizing the care of these cases, which entails the closing or curtailing of clinic work and their reference to the doctors' offices on a moderate fee basis paid from tax funds with adequate social service investigation, seems to offer the best solution of the problem.

Plans are now being made by societies in this district for the inauguration of such a method of handling this problem.

Relations with the various public health departments continue to be somewhat unsatisfactory. The continued efforts of those groups to encroach upon the domain of therapy is a source of much irritation. It would seem desirable that some method should be evolved whereby a working agreement can be reached with the State Board of Health and through them with the various public health officials whereby a better line of demarcation may be established between public health activities and private medical practice.

Respectfully submitted,

W. W. Roblee, *Councilor,*
First District.

SECOND COUNCILOR DISTRICT

Los Angeles County

To the President and the House of Delegates:

Some ten years ago the County Medical Association began the accumulation of a fund by contributions from the members for the acquirement of *permanent quarters*. A lot was purchased, but because of increasing property values was leased to a holding company formed by a group of the members, who acquired adjacent lots and erected a height-limit medical office building. As a result the Association receives a substantial yearly income as ground rental.

Additional contributions to the fund made it possible to acquire other properties, which something over a year ago were exchanged for a corner across the street from the office building, as it was felt that it was to the interest of the Association to stabilize values in that vicinity.

The fund has continued to grow, and in July, 1933, the Board of Trustees appointed a building committee and authorized them to engage an architect and proceed with plans for a library and assembly hall. Unexpected difficulties developed when test holes were sunk for the foundations, and it was necessary to entirely revamp the plans. These difficulties were, however, eventually overcome, and the contracts signed at the close of the year. After all legal formalities had been concluded, the old building which the Association had been using was razed the first week in March, and construction is now actively under way.

When the buildings are completed, we shall have a library 50 by 100 feet, with a capacity of 80,000

volumes, an assembly hall with a seating capacity of 450, ample office space for the Association, meeting rooms, kitchen facilities, and a dining-room capable of seating 150 persons.

The financial obligation which the Association is incurring has been carefully studied. The annual expense will be well within our capacity to meet, and we believe that the buildings can be cleared of debt within the next ten years.

During the past year the *Public Relations* Committee, the *Public Health* Committee, and the officers of the Association have held many meetings and made a large number of contacts with the various departments of governmental and other organizations involved, and much has been accomplished.

Early in 1933 a complete survey of the operations of the County Health Department was made, and these committees jointly prepared a report outlining what was considered to be the duties of a health officer. This outline was approved by the Board of Councilors and submitted to the public health officer of Los Angeles County and to the Board of Supervisors.

The major object of this work was and still is to curb the trend toward unnecessary pauperization of the public by the activities of the Health Department in the field of medical treatment of the individual—a field quite distinct from that of public health.

In August, 1933, the *San Fernando Plan* was developed, and a trial for ninety days granted in the city of San Fernando. Before this plan went into operation, indigents entitled to treatment under the Pauper Act went to the County Health Department Center at San Fernando and received treatment, the treatment being given by the physicians of San Fernando, who gave their services gratis at the health centers. Under the San Fernando Plan these indigents needing treatment work are first social-served by the County Welfare Department and then sent to the offices of a private physician for treatment; or, if they are not ambulant, a physician is sent to their homes. For this work the physician does not receive a fee. He is considered as being on the staff of the County General Hospital, Out-Patient Department. He receives a certain compensation for the use of his office, namely, fifty cents for an office call, and is allowed one dollar for his expenses for each call he makes at the home of a patient.

The plan has since been extended, and at present is in effect in nine or more communities in the county. Fairly comprehensive reports show that it is an economical plan in saving the county money, and that the doctors of the community are receiving certain funds to help maintain their office overhead, which office overhead continued under the old system when these doctors gave their time in charity work at the health centers. One district at the present time is still holding out against the San Fernando Plan.

Those who have studied the operation of this plan see in it a definite answer to an important sociological problem—the tendency to pauperization is very definitely curbed. Many who in the past went freely to a health center, whether or not they needed service, will not go to the office of a private physician unless they actually need medical care. This plan, the Association believes, will prove a very decided factor in tending to rebuild a sense of responsibility into those who in the past felt they were entitled to everything that the county had to give them.

The problem of *federal emergency relief* in Los Angeles County was one of much confusion until recently. It offered two distinct divisions: care of the transients, and care of the unemployed. The Federal Transient Bureau was established in Los Angeles with direct federal funds for its operation. This transient bureau took steps to form a panel of doctors to take care of needy transients. No definite fee schedule had been arranged. The County Medical Association was instrumental in setting a fee schedule for this work in accordance with the interpretation of Bulletin No. 7 for California, namely, a schedule allowing \$1.25 for an office call, \$1.75 for a home call, and \$25 for com-

plete obstetrical service. This schedule was accepted. The County Medical Association was also instrumental in being given authority to appoint a panel of its members for this work. Because of the limited amount of this work, a large panel was unwieldy, so a small panel was named to operate for a period of sixty days, this panel to be replaced at the end of that time by another panel. These rotating panels are to continue as long as this service is necessary.

County Medical Association officers and committees were responsible for bringing out a clear-cut conception of the program of medical care for the unemployed. Numerous meetings were held with the County Emergency Relief Committee, representatives of the Council of Social Agencies, with the State Federal Emergency Relief Commission, with the Board of Supervisors, and Department of Welfare. The program for the medical care of the unemployed is at this writing complete except for minor details. An Executive Committee, representing the County Medical Association, the Dental Association, the Retail Druggists Association, the Council of Social Agencies, and the County Welfare Department, has been sanctioned. The secretary of the County Medical Association is acting as chairman of this Executive Committee.

This committee was charged with working out the mechanics of the operation of the Federal Emergency Medical Relief for the unemployed, which relief operates through the County Welfare Department.

The administration of this relief will rest very largely with the County Medical Association. Panels of physicians and surgeons in good standing, whether members of the County Medical Association or not, will be formed in the various employment districts. The County Medical Association telephone exchange will be used, together with other exchanges located preferably in hospitals in the outlying districts of the county. The program calls for a central medical advisory board, with a medical director or an executive secretary. In the outlying districts committees of three physicians will be named and made responsible for the smooth functioning of this service.

Under the program, those classed as unemployed and entitled to medical care will be social-served by the County Welfare Department and then referred to one of the physicians on the panel. If the unemployed has a personal physician, he will be given first choice; if not, physicians will be called in rotation.

Fees are the same as for transients. It is quite likely that the County Medical Association will act as a clearing house for the disbursement of these funds.

The Public Relations Committee, with a thorough realization of the need of some *medical service plan* to provide proper and adequate medical care for those who now are unable or find it difficult to pay for it, has developed what it considers to be a simple and workable plan. The legal aspects of the plan are now being studied before it is submitted to the membership for adoption. The committee at the present time is charged with the task of immediately perfecting this plan.

The Board of Councilors and the officers of the County Medical Association believe that the rapid changes taking place in our economic fabric demand that organizations seeking to maintain the principles of ethics of medicine must take steps immediately to "clean house"; to stop without delay, in the interests of public welfare, the pernicious spread of such group practices of medicine as constitute a menace to public welfare and to the standards of medical practice. The Association realizes that the public demands certain services within their ability to pay, and that inferior and often dangerous services now controlled by certain lay and medical groups must be replaced by an adequate service.

With this understanding the Public Relations Committee has been charged with the immediate task of perfecting its plan for medical service.

Respectfully submitted,

Carl R. Howson, *Councilor*,
Second District.

THIRD COUNCILOR DISTRICT

Kern, San Bernardino, San Luis Obispo, Santa Barbara and
Ventura Counties

To the President and the House of Delegates:

As was reported last year, the component societies are showing a steadily growing interest in medical economics. Interest is being supplemented by action to a greater degree, especially in Kern and Santa Barbara counties: in Kern over the County Hospital situation, in Santa Barbara over free dispensaries. In the city of Santa Barbara the St. Francis and Cottage hospitals have been obliged to close their free clinics, and the county society is having the usual difficulty convincing the Supervisors that they must furnish adequate facilities for treating the ambulatory indigent sick and what an agreement on minimum adequacy means. Much interest in all counties is shown in the part-pay or limited income groups, and plans will soon be completed to care for them in some of the counties at least. I wish to take this opportunity to compliment the Kern County members for their sustained efforts this last year against an intolerable hospital situation. Their courage and mutual coöperation should be an example to all our component county societies, and their success is vital to the entire practice of medicine in California.

Respectfully submitted,

H. J. Ullmann, *Councilor,*
Third District.

FOURTH COUNCILOR DISTRICT

Calaveras, Fresno, Inyo, Kings, Madera, Mariposa, Merced, Mono,
San Joaquin, Stanislaus, Tulare, and Tuolumne Counties

To the President and the House of Delegates:

I herewith submit the following report as councilor of the Fourth District.

Each organized society in the district has been visited at least once during the fiscal year.

On June 10, 1933, the charter for the Kings County Medical Society was delivered to a charter membership of nine. This year's membership was sixteen—every eligible physician in the county. Regular meetings are held, and this group could be well taken as an example by others who have a lower membership ratio.

Fresno County has the largest membership of any society in the district and in spite of the fact that nine who were affiliated members from Kings County transferred to their local unit, the membership has increased. Fresno County is still much interested in a periodic payment insurance plan for hospitalization. This, no doubt, is due to the fact that a local attorney, representing Mr. Peart's office, is handling the set-up.

San Joaquin County had a most active Public Relations Committee to investigate medical and hospital plans to lessen the cost of sickness. In February of this year, that committee submitted a final report and was discharged with thanks and the understanding that under more favorable circumstances, another committee would be appointed to carry on this work. Membership in this, as well as all other societies, is on the up-trend.

Tulare, Merced, and Stanislaus county societies are active, having regular meetings. Programs of meetings are usually supplied by outside speakers, which assures good attendance.

Medical men in the Fourth District in counties which have no local society affiliate with adjacent county units, hence the ratio of membership to the licentiates in the Fourth District is above the ratio in the state average. Several societies have a joint meeting once a year with the local Bar Association and with the members of the Dental Association.

All units in the district would welcome any feasible plan whereby their medico-economic position could be improved.

Respectfully submitted,

Fred R. DeLappe, *Councilor,*
Fourth District.

FIFTH COUNCILOR DISTRICT

Monterey, San Benito, San Mateo, Santa Clara, and
Santa Cruz Counties

To the President and the House of Delegates:

There has been a very marked increase in the amount of discussion on the various phases of medical economics in the meetings of all the county societies visited in the Fifth District during the past year. Attendance at meetings has been for the most part good. Interesting papers have been presented by both visiting men and members of the local society. One gains the impression from visiting the various society meetings that there is a growing interest in organized medicine, particularly in the smaller county societies.

Respectfully submitted,

Alfred L. Phillips, *Councilor,*
Fifth District.

SIXTH COUNCILOR DISTRICT

San Francisco County

To the President and the House of Delegates:

The past year in this district has seen a great deal of effort expended on the study of group hospitalization. Excellent progress was made up to the point of clearly defining the hospital's position in the rendering of medical service. If this point can be agreed upon we will be ready within a few weeks to present a plan.

The general condition of the membership of this district is good. There is an earnest effort to study all the economic problems pertaining to medicine, and to find a solution which will be just to the physician as well as to the patient.

As usual we have had our differences of opinion among ourselves, but feel that frank expression of honest opinion and honest effort to change and improve existing conditions is always beneficial.

Respectfully submitted,

Karl L. Schaupp, *Councilor,*
Sixth District.

SEVENTH COUNCILOR DISTRICT

Alameda and Contra Costa Counties

To the President and the House of Delegates:

Aside from the usual scientific activities, the major efforts of the Alameda County Medical Association during the past year have been along the lines of medical economics in connection with the Alameda County plan, and the Mutual Hospital plan which is under development.

The Alameda County part-pay plan has been in operation fifteen months, and about two thousand patients have been referred to private physicians for treatment. A complete social survey is at present being made by the social service department of the county to determine the number of patients treated by each physician, the number of visits made, and the amount of money collected, together with the doctors' reaction as to the value of the plan in general.

Both the Alameda County plan for care of part-pay patients and the Mutual Hospital plan will be discussed in detail in the reports of the president and the legal counsel.

Respectfully submitted,

O. D. Hamlin, *Councilor,*
Seventh District.

NINTH COUNCILOR DISTRICT

Del Norte, Humboldt, Lake, Marin, Mendocino, Napa,
Siskiyou, Solano, Sonoma, and Trinity Counties

To the President and the House of Delegates:

A brief report of the medical societies' activities in the Ninth Councilor District during the year 1933 is submitted:

During the past year we have made councilor visits to all county medical societies, with the exception of

the Humboldt County Society. It has been very gratifying to observe the increasing interest taken in the activities of the state society, the Council, and the Executive Committee.

In the counties composing the north bay section the members of the various county societies are visiting the adjoining county meetings, until our medical meetings are becoming very interesting and the good fellowship seems to be as much a drawing card as the scientific papers.

Respectfully submitted,

Henry S. Rogers, *Councilor,*
Ninth District.

REPORTS OF COUNCILORS-AT-LARGE

To the President and the House of Delegates:

As councilor-at-large I have attended all Council meetings of the State Association and have addressed the San Diego County Medical Society on "What We Get for Our Dues to the State Society."

Respectfully submitted,

C. O. Tanner, *Councilor-at-Large.*

To the President and the House of Delegates:

The report of a councilor-at-large must often be of a general nature, and in this instance the details of my year's work will be reflected in the report of the Council that will be presented to the House of Delegates at its first meeting.

A long report here would be only wasting space and the reader's time.

Respectfully submitted,

T. Henshaw Kelly, *Councilor-at-Large.*

To the President and the House of Delegates:

During the past year I have contacted a number of different county units, and they all seem to be alert to their responsibilities, regarding the public health work and the work that the Public Relations Committee is trying to do.

In our own county of Los Angeles it is very gratifying to see the progress that this county unit has made. The construction of our new library and permanent meeting place is progressing in a very satisfactory manner.

Respectfully submitted,

W. H. Kiger, *Councilor-at-Large.*

REPORTS OF STANDING COMMITTEES*

COMMITTEE ON ASSOCIATED SOCIETIES AND TECHNICAL GROUPS

Executive Group

R. Manning Clarke, *Chairman,* 1934

William H. Geistweit, 1936

Clifford Sweet, 1935

To the President and the House of Delegates:

Your Committee on Associated Societies and Technical Groups submit the following as the annual report:

The society most closely allied for the past year seems to have been the Woman's Auxiliary. Their organization seems to have proceeded at a rapid pace. There have been many problems perplexing them because of the newness of their organization, but these have been met very successfully and the society is now in most excellent condition. Each succeeding president has added her full share of organization and improvement. Revision of their Constitution is a

* Members of Standing Committees are urged to meet during the annual session and organize for the coming year and to hold at least one regular meeting of their respective committee during the annual session.

matter that is up before the Council at this annual meeting.

The Dental Association has been very active. Their activities have taken much the same line as those of the Medical Association, as far as medical economics is concerned. They have had many eminent speakers from the East, and their contributions to constructive economics has been no small matter.

The Dietitians' Association are continuing the good work of their organization and are the same active crowd as ever. Their work seems to grow more scientific each year and their organization more closely knit.

The Nurses' Association have also found that economics was one of their biggest problems. I believe there is a much more optimistic tone in their midst at the present time than there has been at any time during the year. Their organization has not weakened. It has forged ahead and contains many most capable and able women.

The pharmacists have reorganized in the southern part of the state. Their organization had failed of existence for some time, but the past year has seen a revival of this organization and it promises to bring about many reforms which were much needed. Abuses in the field of pharmacy have grown to be rather outstanding, and it is to be hoped that the new organization of pharmacists in the southland will help a great deal to correct these. Enthusiasm is not lacking among them, especially since meetings of the association were resumed.

Respectfully submitted,

R. Manning Clarke, *Chairman,*
Committee on Associated Societies and
Technical Groups.

COMMITTEE ON EXTENSION LECTURES

Executive Group

Robert T. Legge, *Chairman,* 1934

J. Homer Woolsey, 1936

James F. Churchill, 1935

The Secretary, *ex officio*

To the President and the House of Delegates:

The Committee on Extension Lectures submit for your consideration the annual report for the year 1933-1934.

Your chairman has kept in touch with the producers of scientific films which are of particular interest to the medical profession. These are on special problems pertaining to surgery, medicine, and public health, and have been listed with the secretary. The films may be rented or loaned by making application to the owners or renters.

The two latest films, just released, are procurable from the Extension Division of the University of California at Berkeley. The new Canti film, a dramatic motion picture, depicts the behavior of living cells, showing the activities of both normal and cancer cells growing in media and the effects of treatment by radium emanations. This film was prepared by the Imperial Cancer Institution of St. Bartholomew's Hospital, London. The other film is Antony van Leeuwenhock's film, the first of the microbe hunters, "The Revelation of the Microscope."

A revision of the list of lecturers with new subjects is now in the process of development, and will be published shortly.

There are many members of our society who have prepared interesting papers of merit, or who have conducted researches in certain fields, or developed certain technical devices or operations, which would be of intense interest to the profession and welcomed by our various county medical units. Your committee welcomes such investigators as extension lecturers of the California Medical Association, and requests them to be listed with the title of their articles with the secretary of the Association.

Respectfully submitted,

Robert T. Legge, *Chairman.*

COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

Executive Group

Fred B. Clarke, Chairman, 1935

W. R. P. Clark, 1936

Langley Porter, 1934

To the President and the House of Delegates:

Your Committee on Health and Public Instruction must necessarily make all suggestions to the Department of Public Relations, since that organization is equipped to carry out the suggestions made by all the standing committees.

During the past year several suggestions have been made to the Department of Public Relations. They are as follows:

1. Development of a speakers' bureau in each county in order that we may educate the public as to what scientific medicine has accomplished in the way of prevention and treatment of disease.

It is only through publicity that we can hope to acquaint the public with the wonderful strides that have been made in medical science during the last few years.

It is to be hoped that each county medical society will develop a speakers' bureau and that the secretary of each society will make definite engagements for these speakers to appear before various luncheon clubs, Parent-Teacher associations, etc.

2. It has been recognized that physicians do not occupy the place in the prevention of disease that they should, and while they are not satisfied, they have permitted public health agencies to take their place in immunization against diphtheria, smallpox, etc.

The Medical Society of Wayne County, Michigan, has worked out a plan which apparently is perfectly satisfactory, and your committee has urged the Department of Public Relations to encourage the adoption of this or a similar plan in each county of the state.

3. The American Medical Association is broadcasting over two national hook-ups each week, and it has been urged that each component county medical society arrange to carry an advertisement in the local newspapers regarding the value of these national broadcasts. If this advertisement is carried, it will be relatively easy to secure definite and conspicuous notice in the daily columns devoted to radio broadcasting.

Respectfully submitted,

Fred B. Clarke, *Chairman*.

COMMITTEE ON HISTORY AND OBITUARIES

Executive Group

Charles D. Ball, Chairman, 1935

J. Marion Read, 1936

George D. Lyman, 1934

The Secretary, ex officio

The Editor, ex officio

To the President and the House of Delegates:

Your Committee on History and Obituaries begs to submit the following report. Appended to this report is a list of the sixty-seven members of the California Medical Association who, since our last report, were taken from us through death. We pause in silence for a moment, in respect to them, before we again take up the tasks which they and we chose as our life's work.

The California Medical Association is now seventy-five years old. It has had a distinguished career. Its members, in the days gone by, have given to the people of California much gratuitous service that has made for the happiness and prosperity of its citizens. Out of respect to these men who in the last decades have maintained the standards of scientific medicine it would seem proper that a real beginning should be made by the Association in the collection of California medical publications and reports and other data that would place in the office of the Association at San Francisco at least the skeleton material that could

be used in the compilation of a real history of organized medicine in our state. Those who come after us will have a real right to accuse us of negligence if we do not begin to gather this historical material while the opportunity still exists.

The chairman of this committee requests that the allocation of some \$300 for such work, made several years ago, be again placed on the budget, to be used in whole or in part during the coming year to permit a real beginning in the work assigned to the committee. Unless such an appropriation is made, it is evident that your committee can do little more than present a list of deceased members as compiled from CALIFORNIA AND WESTERN MEDICINE. If the allocation of funds is made, as above requested, your committee will strive to make an active start in the work for which it was appointed.

There were sixty-seven deaths this year, one more than in the previous year. The list of deceased members follows:

IN MEMORIAM

- Alexander, Ralph Lee, October 19, 1933, age 57, Orange County.
- Armistead, Howell V., September 12, 1933, age 74, Newman.
- Armstrong, Maurice Moray, February 8, 1933, age 60, Los Angeles.
- Berry, Andrew Jackson, February 12, 1933, age 68, Los Angeles.
- Braafladt, Louis Henry, November 10, 1933, age 48, Sacramento.
- Breitstein, Louis Isidor, May 19, 1933, age 54 years, Virginia City, Nevada.
- Brier, Isabel Presbrey, July 7, 1933, age 34 years, Livermore.
- Brooks, Thomas Cottrell, January 10, 1933, age 58 years, Los Angeles.
- Bryant, Ernest Albert, October 19, 1933, age 65, Los Angeles.
- Carey, George H., January 31, 1933, age 57, Los Angeles.
- Carroll, John Joseph, July 21, 1933, age 37, San Francisco.
- Costar, William James, Jr., October 25, 1933, age 34, Butte County.
- Craig, William H., January 9, 1933, age 74, Upland.
- De Lucis Cav. Andrea, August 21, 1933, age 82, San Francisco.
- Dickerson, Wilmer Lambert, March 23, 1933, age 77, Long Beach.
- Dickson, George Gillespie, June 27, 1933, age 47, Los Angeles.
- Dray, Frank Raymond, June 24, 1933, San Francisco.
- Edelman, David William, August 6, 1933, age 64, Los Angeles.
- Edwards, William A., November 15, 1933, age 73, Los Angeles.
- Fay, Franklin Goble, February 14, 1933, age 69, Auburn.
- Frankenheimer, Jule B., December 14, 1933, age 60, San Francisco.
- Fraser, Morton William, October 4, 1933, age 45, Tulare.
- Gallup, Howard Augustus, October 9, 1933, age 49, San Luis Obispo.
- Gaynor, John Joseph, October 1, 1933, age 79, Santa Cruz.
- Hartman, William Walter, April 25, 1933, age 32, Los Angeles.
- Hely, Levi St. John, December 19, 1933, age 64, Contra Costa County.
- Hulbert, George G., June 1, 1933, age 82, San Diego.
- Hunter, George Graham, December 13, 1933, age 57, Los Angeles.
- Irwin, William Hayes, March 13, 1933, age 57, Oakland.
- Jennings, George Darwin, June 6, 1933, age 61, Los Angeles.
- Johnson, Carl, September 14, 1933, age 64, Los Angeles.
- Jorgenson, Hans Christian, September 9, 1933, age 57, San Diego.
- Kergan, Henry Sidney, May 10, 1933, age 62, Oakland.
- Knorp, Francis Frederick, January 20, 1933, age 60, San Francisco.
- Lessard, Mark Davis, August 1, 1933, age 52, San Francisco.
- Look, Hallack Hart, December 26, 1933, age 72, Sacramento.
- Lynch, Jerre George, September 18, 1933, age 55, Los Angeles.
- Lyster, Theodore Charles, August 6, 1933, age 58, Los Angeles.
- MacDonald, Harley Edgard, April 20, 1933, age 55 years, Redding.
- Magan, Shaen Saurin, August 30, 1933, age 37, Los Angeles.

Martineau, Allen Sherman, July 29, 1933, age 36, San Diego.
McElroy, Bernard F., November 7, 1933, age 61, San Francisco.
McSwain, Thomas Omar, August 10, 1933, age 71, Tulare.
McKinnon, George Washington, November 21, 1933, age 67, Arcata.
Mehrtens, Henry George, February 28, 1933, age 47, San Francisco.
Miller, Charles Howard, February 2, 1933, age 62, San Francisco.
Miller, Edwin M., February 16, 1933, age 63, Santa Clara.
Moots, Charles William, October 14, 1933, age 64, San Bernardino.
Mueller, Carl Amandus, January 30, 1933, age 67, Redding.
Olliver, Joseph A., October 17, 1933, age 71, San Francisco.
Ophüls, William, April 27, 1933, age 62, San Francisco.
Parks, Joseph Andrew, February 8, 1933, age 61, La Mesa.
Pope, Frederick Samuel, October 9, 1933, age 65, Santa Ana.
Roncovieri, Alfred, May 16, 1933, age 46, San Francisco.
Russell, Tracy George, June 18, 1933, age 46, San Francisco.
Sanford, Paul, September 29, 1933, age 74, Santa Clara.
Schurter, Maximilian Adolph, August 21, 1933, age 51, Los Angeles.
Shanks, Frederick Hastings, July 28, 1933, age 64, San Francisco.
Sherwood, Oscar William, May 14, 1933, age 71, Fort Bragg, Mendocino.
Stivers, Charles Gaskill, March 25, 1933, age 72, San Jose.
Talbot, William Thompson, November 9, 1933, age 52, Imperial County.
Tower, Ora Isaiah, September 4, 1933, age 47, Los Angeles.
Wald, Olander E., September 16, 1933, age 65, Los Angeles.
Wightman, William Dewey, December 6, 1933, age 35, Los Angeles.
Wills, William LeMoyné, December 4, 1933, age 80, San Marino.
Wislocki, Eugene John, January 9, 1933, age 72, San Jose.
Fifteen obituaries were reported:
Edelman, David William, August 6, 1933, Los Angeles.
Fay, George Howard, February 24, 1933, Auburn.
Gallup, Howard Augustus, October 9, 1933, San Luis Obispo.
Hunter, George Graham, December 12, 1933, Los Angeles.
Knorp, Francis Frederick, 1933, San Francisco.
Levengood, H. Wilson, 1933, Santa Monica.
Lyster, Theodore Charles, August 5, 1933, Los Angeles.
Mehrtens, Henry George, February 28, 1933, San Francisco.
Miller, Edwin M., February 16, 1933, Los Gatos.
Magan, Shaen S., August 31, 1933, Covina.
Moots, Charles W., October 14, 1933, age 64, San Bernardino.
Ophüls, William, April 27, 1933, Stanford College.
Pope, Frederick, October 19, 1933, Santa Ana.
Wills, William LeMoyné, December 3, 1933, San Marino.
Woodbridge, Bradford, August 17, 1933, Placer County.

Respectfully submitted,
Charles D. Ball, *Chairman*.

COMMITTEE ON HOSPITALS, DISPENSARIES AND CLINICS
Executive Group

Daniel Crosby, Chairman, 1935
John C. Ruddock, 1936 Karl L. Schaupp, 1934

To the President and the House of Delegates:
There has been no formal meeting of the Committee on Hospitals, Dispensaries, and Clinics during the year. Doctor Ruddock has been active in working with the California State Board of Health in their attempt to write standards for clinics and attempt to license clinics in the state of California, in conformance with the recent Assembly Bill 1277 that passed the legislature.
Unfortunately there has been no money available for investigators, and the first year's licenses have been entirely on paper in the attempt to accumulate a fund that they can begin to use in subsequent years by hiring investigators.
The California State Board of Health would welcome a program of standardization or rules whereby the various classes of clinics, as outlined in the Assem-

bly Bill, could be licensed. This would mean that these clinics must conform to a certain standard program before such license would be allowed.
In all, Doctor Ruddock met with the California State Board of Health, or representatives from them, at least a half-dozen times.
Respectfully submitted,
Daniel Crosby, *Chairman*.

COMMITTEE ON MEDICAL DEFENSE
Executive Group

Henry Snure, Sr., Chairman, 1934
Fred R. DeLappe, 1936 George G. Reinle, 1935

To the President and the House of Delegates:
No meetings of the Committee on Medical Defense were held during the year. The operation of the "Optional Defense" plan has been fully described in previous bulletins. On May 3, 1933, our group policy with the United States Fidelity and Guaranty was discontinued and members obtained individual coverage with the various companies writing malpractice insurance in this state. Members of the medical society of the state of California retain the services of their legal counsel as before, the membership fee remaining at \$10, and all are advised to obtain this coverage, particularly at a time when the insurance companies are threatening to withdraw or limit the policies. The number of suits seems to be increasing and no doubt the insurance companies will increase their rates. The committee believes that all members should avail themselves of the medical defense offered by the medical society of California, thereby permitting our personal attorneys to represent us in conjunction with the other insurance carrier.
Respectfully submitted,
Henry Snure, *Chairman*.

COMMITTEE ON MEDICAL EDUCATION AND MEDICAL INSTITUTIONS
Executive Group

George Dock, Chairman, 1936
George G. Hunter,* 1936 H. A. L. Ryfkogel, 1934

To the President and the House of Delegates:
I beg to report for part of the Committee on Medical Education and Medical Institutions.
Doctor Ryfkogel has kindly offered to report on the northern institutions, and I shall cover the two medical schools in Los Angeles.
The School of Medicine of the University of Southern California completed the academic work of the first class since the reorganization in June, 1933. Thirty students were eligible for the fifth or intern year taken under the direction of the University. Most of these students are now serving as interns in the Los Angeles County General Hospital.
Most of the work of the first two years is done on the campus of the University of Southern California, that of the third and fourth years being carried on at the County Hospital, the Children's Hospital, and the Eye and Ear Hospital. The clinical work is done under the supervision of groups of instructors, some on part time, others as volunteers. The county patients are now being moved into the new building, where the facilities for clinical teaching will be much better than hitherto, and the facilities as regards patients and laboratories, also of very high class.

The first year class is limited to fifty-six students. For the present session, registration is: first year, 56; second year, 46; third year, 33; fourth year, 35; fifth year, 30.
I am personally familiar with the work of the school, and think it of very high quality.

* Deceased.

The other medical school in Southern California is the College of Medical Evangelists, which was organized and chartered in 1909.

The school requires a college premedical training of at least two years.

The freshman and sophomore years are conducted at Loma Linda, San Bernardino County.

The junior and senior years are conducted in Los Angeles, chiefly in the Los Angeles County General Hospital and in White Memorial Hospital, which is owned and controlled by the college. Special lines of work are carried on in other institutions.

An intern year in an approved hospital is a prerequisite to the granting of the diploma of doctor of medicine.

This college has adopted the examinations of the National Board of Medical Examiners instead of its own examinations. Part I of the National Board examination must be completed before the student is permitted to enter upon the fourth year. The passing of Part II is prerequisite to receiving the diploma at the completion of the fifth year.

The enrollment for the current session is as follows: First year, 129; second year, 90; third year, 100; fourth year, 84; interns, 90; total, 493.

The chief object of the College of Medical Evangelists is the scientific training of doctors of medicine for service in heathen lands.

I am familiar with the medical work of this school and believe it fully up to the best standards.

Respectfully submitted,

George Dock, *Chairman.*

❧

The University of California Medical School is conducted by the University of California as a five-year medical curriculum, including a four-year medical course and a fifth or intern year.

The work of the first year, including anatomy, physiology, and biochemistry, is given on the campus of the University of California in Berkeley. The work of the second, third, and fourth years is given at the Medical Center in San Francisco. Each year is divided into two semesters of sixteen weeks each.

Classes are limited in number to sixty students. Students are admitted on the basis of scholarship, three years of premedical work being required for admission.

The curriculum comprises more than four thousand hours and conforms to the requirements of the Medical Practice Act of the State of California and the Association of American Medical Colleges.

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The Stanford School of Medicine is conducted by Stanford University and provides a five-year course of medical education for students who have completed three years of premedical education after high school graduation. Classes are limited to sixty students, and at present we have two hundred and fifty students enrolled.

The preclinical work is done by the students at the University campus during their first four quarters; the clinical work is done at San Francisco during the next eight quarters; and a year's internship is required before the degree of doctor of medicine is awarded.

The course given covers all the basic sciences related to medicine as well as the course in various branches of medicine, and a student is required to complete not less than four thousand hours of study, exclusive of his intern year. The premedical and medical curricula contain considerably more than the minimum requirements established by the State Board of Medical Examiners and by the Association of American Medical Colleges.

The San Francisco Polyclinic and Postgraduate School conducts a class in operative technique. This course is continuous and the attendance averages about thirty-five.

Respectfully submitted,

H. A. L. Ryfkogel.

COMMITTEE ON PUBLICATIONS

Percy T. Magan, Chairman, 1934

Ruggles A. Cushman, 1935

Frederick F. Gundrum, 1936

The Editor, ex officio

The Secretary, ex officio

To the President and the House of Delegates:

CALIFORNIA AND WESTERN MEDICINE, the official journal of the California Medical Association, has passed through another year of its history, and the chairman of your committee is confidently of the belief that this journal still stands in the van among all the state medical journals of the United States. This is true both in regard to its size, its make-up and style, as well as in regard to its most excellent contents. It is a fact, to be sure, that, according to varying tastes, changes could be made therein. But this is true of any and every scientific journal in the land. On the other hand, in a publication which is consulted month by month by many readers in an association having some five thousand members, it is important to maintain the order of the table of contents so that readers may easily find the articles or departments in which they have special interest. This is the reason for maintaining the table of contents on the front cover with absence of all advertisements. Your chairman is further of the belief that it is very proper that the scientific articles should be given first place and the editorial and other departments arranged, as is the custom in most medical publications, in that sequence best adapted to convenient typographical make-up and minimum cost, as well as nature of contents.

In an editorial in the January 27 *Journal of the American Medical Association*, entitled "Changes in State Medical Periodicals," complimentary mention was made of modifications of policy in two of the eastern medical journals. It is gratifying to note that the changes there mentioned, for a number of years have been a part of the accepted policy of CALIFORNIA AND WESTERN MEDICINE, as authorized by the California Medical Association Council.

It is to be regretted that all the excellent papers read at each annual session of the California Medical Association cannot be accepted for publication. Perhaps when good times return, so that the advertising income can be materially increased, a larger journal and a more liberal policy can again come into vogue. In connection with the advertising department, it is gratifying to learn that a slow but hopeful increase in sale of advertising space has taken place. With the appointment of a new advertising representative for Southern California, it is felt additional income will accrue from that section of the state.

As stated in the beginning, our official journal in recent years has maintained a somewhat stable form that has evidently appealed to the majority of its readers. The discussions of the scientific papers extends the list of contributors considerably. The editorial columns have kept the members in touch with new activities of the California Medical Association and of organized medicine. In the Editorial Comment department, presentations on scientific topics are made by contributing members. The official and local and more personal news are cared for in the California Medical Association and other departments which complete the magazine. All in all, as already stated, CALIFORNIA AND WESTERN MEDICINE is an official state medical journal which, while it strives to constantly improve, nevertheless answers a need, and seemingly fulfills it in more than passing good form.

Respectfully submitted,

Percy T. Magan, *Chairman.*

COMMITTEE ON PUBLIC RELATIONS

Charles A. Dukes, Chairman, Cancer Commission.
 Fred B. Clarke, Chairman, Committee on Health and Public Instruction.
 Morton R. Gibbons, Chairman, Committee on Industrial Practice.
 Junius B. Harris, Chairman, Committee on Public Policy and Legislation.
 Daniel Crosby, Chairman, Committee on Hospitals, Dispensaries and Clinics.
 Harry H. Wilson, Chairman, Committee on Membership and Organization.
 John H. Graves, Chairman, Committee on Medical Economics.
 George G. Reinle, ex officio, President of California Medical Association.
 Clarence G. Toland, ex officio, President-Elect.
 Emma W. Pope, Secretary.
 Hartley F. Peart, Attorney, Legal Counsel, California Medical Association.
 Walter M. Dickie, Director, Department of Public Relations.

To the President and the House of Delegates:

One of the principal activities of the Committee on Public Relations has been to study and analyze the various hospital and medical service plans which have been proposed or put into operation by the component county medical societies, groups of doctors, etc.; to assist and advise with representatives of component county medical societies in reference to the institution or formulation of medical hospital service plans. The department has coöperated with the legal counsel and the special committee of the Alameda County Medical Society in the formulation and establishment of a hospital service on a periodic payment plan. Alameda, Fresno, and Santa Clara societies have completed their plans and are about to offer this service to the general public. Many major problems have had to be solved in order to meet the principles as laid down by the Association as well as complying with the law that a corporation cannot practice medicine.

The problem of eliminating pay patients from our public hospitals has been given careful study and a campaign has been instituted to bring about the establishment of a plan for the admission only of indigent patients to our county hospitals; in other words, remove the political influence that has been a factor in the admission of patients who are not eligible. The Alameda Plan, which has been explained in detail in recent numbers of CALIFORNIA AND WESTERN MEDICINE, is undoubtedly the most practical plan that so far has been offered. This plan calls for the establishment of a county institution commission which has the control and management of county institutions. In addition to Alameda County, Sacramento, Fresno, San Bernardino, San Diego, and Riverside have adopted this plan, at least in principle, and a satisfactory solution of the problem has been attained. This matter is being brought to the attention of other component county medical societies with the object of making the plan universal.

The department has made a survey of medical books on the shelves of public libraries in counties of the state with a population of ten thousand or over. The department, with the approval of the Council, has prepared a list of some thirty medical books which they consider are accurate sources of information set forth in easily understandable form. This list was sent to the libraries with the request that they designate the books that were now on their shelves. Each component county medical society was requested to appoint an educational committee whose purpose is to contact the librarians of their county, to determine how many books contained upon the list were not available to the public and to endeavor as far as possible to have these additional books purchased in order that the list may be complete.

The Council has also instructed the department to institute a membership campaign in order to increase the membership of the Association. This necessitated checking the licentiates of the state who were not members of the California Medical Association. A list of all licentiates in each county who did not belong to the respective component county medical societies was

compiled. These lists were sent to the secretaries of the component county medical societies with the request that they designate whether in their opinion the licentiates would be eligible for membership or if at any time they had been rejected, died, retired, or moved away. This department will coöperate in any plan the component county medical societies may adopt in order to increase their membership.

For the second year the State Association has installed exhibits at the State Fair at Sacramento and the Los Angeles County Fair at Pomona. The object of these exhibits is to acquaint the public with what the California Medical Association is doing in the way of advancing scientific medicine. Seven hundred thousand persons attended these two fairs.

The Council of the California Medical Association employed a publicity agent who was placed under the Department of Public Relations. Through this agent articles on suitable medical subjects have been prepared for the lay press. These articles are now appearing in different papers throughout the state.

Each county medical society has been requested to establish a speakers' bureau, to prepare a list of volunteer speakers from their society who are willing to prepare and deliver short talks before such groups as Parent-Teacher associations, women's clubs, service clubs, church organizations, etc. When this information is received from the local societies, it will be compiled and arranged in such form that information in regard to speakers and subjects will be available to the component county medical societies. This will also make it possible for the local societies to exchange speakers and subjects. A list of suitable topics for talks before the lay groups, or any other information or assistance as may be necessary to make this undertaking a success, will be gladly furnished by this department. There is no doubt that the medical profession has been negligent in the contacting of the public, while other professions and organizations have used this method with marked success.

Respectfully submitted,

Charles A. Dukes, *Chairman.*

COMMITTEE ON SCIENTIFIC WORK

Executive Group

Emma W. Pope, Chairman
 F. M. Pottenger, 1936 H. O. Koefod, ex officio
 Lemuel P. Adams, 1934 Edwin M. Taylor, ex officio
 J. Homer Woolsey, 1935

To the President and the House of Delegates:

The Committee on Scientific Work has held three meetings during 1933: one a reorganization meeting at the annual session to discuss with the newly elected section officers plans for the program of the following year; one a meeting of the committee alone to select guest speakers and discuss plans for the bettering of the annual session; and one at Riverside with section secretaries and the Arrangements Committee, held on the last Sunday in January, to review in detail the programs prepared by section officers and to secure full information regarding entertainment, clinics, public meetings, and rooms for the various gatherings.

The Program Committee at the annual luncheon meeting recommended to the Council an intensive three-day program instead of the four-day session that was begun with the meeting at Yosemite in 1922. This request the Council complied with at the last meeting of the Council at the annual session, but rescinded at the fall meeting when the constitutional provision that an interval of twenty-four hours must intervene between the two House of Delegates meetings was brought to their attention. The Program Committee, at its January meeting, regretted the change and again recommended a three-day session. This they feel could be arranged if the first meeting of the House of Delegates is held on the night preceding the first general meeting. The Program Committee believe that members of the House of Delegates would be present at

that meeting, and that the attendance at the first general meeting on the morning following would be greatly augmented and that many more members would attend during the entire session were all the hours filled with instructive meetings rather than entertainment.

In order that only one afternoon should be devoted to entertainment at Riverside, clinics will be held on Wednesday morning, and the section meetings usually scheduled for that hour will be deferred until Wednesday afternoon. This year there will be several outstanding symposia: one on arthritis, in which Dr. Russell Cecil and Dr. John D. Camp will take part; one on diseases of the respiratory tract, in which Dr. Irvine McQuarrie will preside.

Your Committee on Scientific Work and the section officers have given generously of their time and thought to make the Riverside meeting an outstanding one.

With the excellent program provided and reduction in railroad fares and hotel rates, the Riverside meeting should be well attended.

Respectfully submitted,

Emma W. Pope, *Chairman*.

REPORTS OF COMMISSIONS, SPECIAL AND COUNCIL COMMITTEES

AUDITING COMMITTEE

Executive Group

Karl L. Schaupp, *Chairman*

Morton R. Gibbons

O. D. Hamlin

To the President and the House of Delegates:

The Auditing Committee has scrutinized all the expenditures of the Association during the year 1932 and has approved, as set forth in the Constitution and By-Laws, all expenditures that were properly authorized.

The books of the Association have been audited and found correct by Mr. Hugh Ross, certified public accountant.

Respectfully submitted,

Karl L. Schaupp, *Chairman*.

CANCER COMMISSION

Executive Group

Charles A. Dukes, *Chairman*

Lyell C. Kinney, *Vice-Chairman*

Alson R. Kilgore, *Secretary*

Orville Meland, *Secretary for Southern Section*

Harold Brunn

Gertrude Moore

Henry J. Ullmann

A. Herman Zeiler

Clarence G. Toland

To the President and the House of Delegates:

The diagnosis and treatment studies undertaken by the Cancer Commission in 1931 were nearly completed in 1933. The last reports will be published early this year, after which they will be ready for distribution to the members of the California Medical Association in collected reprint form. Advance requests for more than two thousand of these have already been received from individuals and organizations outside the state, and we are encouraged to believe that this activity of the California Medical Association has received rather wide and favorable attention.

Organization of county cancer committees to take charge of lay publicity was begun in 1933 and will be completed this year. Several important lay organizations have already been addressed through the activities of such committees and through the generous cooperation of the Woman's Auxiliary.

Presentation of programs before county societies by teams organized by the Commission has been continued. The following county societies were visited in 1933: Fresno, Kern, Los Angeles, Orange, Placer,

Sacramento, San Diego, San Francisco, San Joaquin, San Mateo, Santa Barbara, Santa Clara, Shasta, Ventura, Tulare, Humboldt, Alameda, Monterey.

Respectfully submitted,

Alson R. Kilgore, *Secretary*.

REPORT OF THE SPECIAL COMMITTEE ON A BASIC SCIENCE (QUALIFYING CERTIFICATE) ACT

To the President and the House of Delegates:

In the March, 1934 issue of CALIFORNIA AND WESTERN MEDICINE, page 194, an article was printed, entitled "Does California Need a Basic Science (Qualifying Certificate) Law?" In that presentation the plan of a California basic science or qualifying certificate law was outlined.

The great value of such a law lies in the fact that a legal enactment of that character goes far in discouraging the advent of new cults; which practically always, in their early stages, secure students and thrive and prosper on common school standards of education. Such cults die "a-borning" if unable to secure students. When they have few students, such cults have few "doctor" graduates, and rarely become strong enough politically, to engraft through legislative or initiative action, a new cult upon the state. That being the case the enactment of a basic science (qualifying certificate) law would seem to be worthy of the serious attention of the members of the California Medical Association. The tentative plan of a basic science act outlined in the article above referred to is the result of much study and discussion. Suggestions for modifications are invited, and will be welcomed.

Respectfully submitted,

George H. Kress, *Chairman*.

COMMITTEE ON ANNUAL SESSION ARRANGEMENTS

Executive Group

William W. Roblee, *Chairman*

Hervey S. Faris

Bon O. Adams

G. Wayland Coon

Arthur W. Walker

Thomas A. Card

To the President and the House of Delegates:

The Committee on Annual Session Arrangements has met from time to time. We are able to report that the local arrangements have been completed and that we can assure the Association members that they and their families will be well cared for. Hotel accommodations, meeting rooms, special events and entertainment, all promise a happy visit to all who come.

Respectfully submitted,

W. W. Roblee, *Chairman*.

Carbon Monoxid Days Are Here.—Every year health officers issue warnings on the dangers of carbon monoxid poisoning from the exhaust fumes of automobiles. Carelessness, however, is responsible for a number of deaths from this cause each winter. A car should never be left running in a closed garage and the utmost care should be exercised in securing adequate ventilation of all garages. Carbon monoxid poisoning is so insidious in its onset that the victim is unaware of the approaching danger.

With the advent of natural gas, hazards due to carbon monoxid poisoning in the home have been reduced very greatly. There is danger of asphyxiation, however, through failure to connect household gas appliances to an outside vent. It is possible to incur fatal illness through this source. Fortunately, the chances for contracting carbon monoxid poisoning in the home are not as many as they were a few years ago. At all events, gas appliances in the home should be connected with outside vents always. Individual health may be damaged and fatal illness may be incurred through the inhalation of gas products and through the depletion of oxygen in the air.

STATE MEDICAL ASSOCIATIONS

This department contains official notices, reports of county society proceedings and other information having to do with the state associations and their component county societies. The copy for the department is edited by the state association secretaries, to whom communications for this department should be sent. Rosters of state association officers and committees and of component county societies and affiliated organizations, are printed in the directories noted under Miscellany, on the front cover index.

CALIFORNIA MEDICAL ASSOCIATION

GEORGE G. REINLE President
CLARENCE G. TOLAND President-Elect
EMMA W. POPE Secretary-Treasurer

OFFICIAL NOTICES

Last Journal to Delinquent Members.—"If the annual assessment of dues," which Chapter X, Section 1, of the By-Laws states is payable on January 1, "is not paid on or before April 1 of any year, such member shall automatically lose his membership in the California Medical Association as of April 1 of such year."

Loss of membership includes loss of CALIFORNIA AND WESTERN MEDICINE. Names of delinquent members are each year removed from the April mailing list, and while "the Council of this Association in its discretion upon payment of such unpaid dues accruing thereafter, may at any time reinstate such member" missing numbers of CALIFORNIA AND WESTERN MEDICINE which have been lost through such delinquency cannot be supplied on request of the reinstated member, as only a small excess over the actual number of names on each mailing list is ordered.

Remember the date of delinquency, *April 1*. Guard against loss of your state journal by paying your annual dues now.

* * *

Railroad Transportation to Riverside—Annual Session (April 30 to May 3, 1934).—Buy through ticket to Riverside on *Sunset Limited*, Sunday, April 29. If twenty-five or more passengers on the Sunday night *Limited* hold Riverside tickets, special electric trains to Riverside will connect at the Southern Pacific depot in Los Angeles, to take passengers direct to Riverside. The *Sunset Limited* leaves San Francisco at 6:45 p. m. and reaches Los Angeles at 8:15 a. m.

The Lark and Padre arrive too late to permit attendance at the opening of the Monday general session.

* * *

Reduced Rates.—Buy your ticket to Riverside, via Los Angeles, on *Sunset Limited*. Secure identification certificate from the State office, which will entitle you to material reduction in round-trip ticket if used when ticket is purchased on or after April 26.

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Under "Correspondence," in the March CALIFORNIA AND WESTERN MEDICINE, page 214, appeared a letter from the Southern Pacific Company offering a material reduction on railroad rates to the Riverside convention on a special round-trip convention fare. Under that plan, tickets from San Francisco may be purchased for \$13.60—\$7.50 less than the regular round-trip rate.

You must use a certification sheet from the State Association Secretary in order to purchase a ticket at the reduced rate.

* * *

Microscopic Pathology and the Radiology Diagnostic Conferences.—The same privilege will be extended to members going to Riverside on the *Sunset Limited*, Saturday, April 28, as to those going by the same train on Sunday, April 29.

Hotel Rates for Annual Session*

April 30 to May 3, 1934

MISSION INN, SEVENTH AND MAIN STREETS,
CONVENTION HEADQUARTERS

American Plan

Single rooms without bath, \$6 per day.
Single room with bath, \$8 per day.
Double room without bath, \$11 per day.
Double room with bath, \$13 per day.

✓ ✓ ✓

Other Riverside Hotels

EUROPEAN PLAN

Reynolds Hotel, 3662 Ninth Street—One Hundred Rooms

Single rooms without bath, \$1.50.
Single rooms with bath, \$2.50.
Double rooms without bath, \$2.50.
Double rooms with bath, \$3.50.

Tetley Hotel, 3401 Eighth Street—One Hundred Rooms

Single rooms without bath, \$1 and \$1.50.
Single rooms with bath, \$1.50 and \$2.
Double rooms without bath, \$1.50 and \$2.
Double rooms with bath, \$2 and \$3.

Plaza Hotel,† 3824 Eighth Street—Forty-Two Rooms

Single rooms without bath, \$1.
Single rooms with bath, \$2 and \$2.50.
Double rooms without bath, \$1.50.
Double rooms with bath, \$3.

Potter Hotel, 3900 Market Street—Twenty-Six Rooms

Single rooms with bath, \$2 and \$2.50.
Double rooms with bath, \$3 (garage included).

Warrington Hotel, 3216 Main Street—Twenty-Eight Rooms

Single rooms without bath, \$1.
Single rooms with bath, \$1.50.
Double rooms with bath, \$2.50.

Aureau Vista Hotel, 3480 Eighth Street—Twenty Rooms

Single rooms with bath, \$1.50 and \$2.50.
Double rooms with bath (twin beds), \$2 and \$3.50.

Victoria Hotel, 3640 Seventh Street—Twenty Rooms

Single rooms without bath, \$1.
Single rooms with bath, \$2.
Double rooms without bath, \$2.
Double rooms with bath, \$2 and \$3.50.

Casa De Anza Hotel, 3425 Market Street—Eleven Rooms

Single rooms, \$2.50.
Double rooms, \$3.50.
Twin beds, \$4.

* Mission Inn rates are American plan, rates of other hotels are European plan.

† Connecting rooms with bath, deduct 50 cents from rate of two rooms. Suites available for parties of three and four.

Cancer Conferences at Riverside.—Again this year the popular Microscopic Pathology Conference and the Radiology Diagnosis Conference, under the auspices of the Cancer Commission, will be held at Riverside on Sunday, April 29, 1934, immediately before the California Medical Association convention.

At each conference, cases are presented and members in attendance have opportunity to study and diagnose microscopic slides or films, following which the important features of the case are discussed by the demonstrators. Complete programs of subjects and cases will be announced later.

The number attending the conferences has to be limited on account of space available and number of slides and films prepared. Members desiring to attend are requested to register as early as possible through the office of the Cancer Commission, 450 Sutter Street, San Francisco, or with the secretary for Southern California, Dr. Orville N. Meland, 1407 South Hope Street, Los Angeles, or with the committees in charge.

RADIOLOGY COMMITTEE

Kenneth Davis, St. Vincent's Hospital, Los Angeles.
E. N. Liljedahl, Good Hope Clinic, 1241 Shatto Street, Los Angeles.
Paul Thuresson, 3770 Twelfth Street, Riverside.

PATHOLOGY COMMITTEE

Newton Evans, 1100 N. Mission Road, Los Angeles.
Ernest M. Hall, 3551 University, Los Angeles.
George D. Maner, 523 W. Sixth Street, Los Angeles.

* * *

Next Council Meeting.—The date of the next meeting of the Council has been set for Sunday, April 29, 1934, at 8 p. m., in the Alhambra Room, Mission Inn, Riverside.

COMPONENT COUNTY MEDICAL SOCIETIES

CONTRA COSTA COUNTY

The second monthly meeting for the year of the Contra Costa County Medical Society was held on Tuesday evening, February 13, at the Hotel Carquinez, Richmond. The attendance was twenty-five.

A splendid program was presented by Dr. William Sargent of Oakland. He gave two papers—the first, *Epithelioma of the Lip*; the second, *Pulmonary Tuberculosis of Childhood*. Both talks were generously illustrated by slides, and were followed by much discussion by the members. Doctor Sargent was introduced by Dr. J. B. Spalding, who served as chairman of the evening.

The secretary announced the loss to the society, through death, of one of our oldest members, Dr. C. R. Leech, of Walnut Creek, during the past month, and presented an In Memoriam poem, indited by Dr. J. B. Spalding. The poem follows:

IN MEMORIAM

To our friend and brother, Dr. Claude R. Leech.

After the day, the night;
After the night, the dawn.
Gently your soul takes its flight.
Just absent, but not really gone.

A life that was pure, undefiled,
Whose motto was "Duty and Love."
A nature so sweet and so mild
As though it were fashioned above.

And now you have gone to your rest,
Where your virtues will reap their reward.
Your memory will always be blest—
A memory of sacred regard.

When Death severs life's dearest ties
And it seems a rude, chastening rod,
May our Faith re-envision our eyes
And behold the glories of God.

Doctor Stauffer announced that the next meeting of the society will be held on March 13 at Martinez, with Dr. Harry Ford as chairman.

Dr. E. H. Benson of Berkeley addressed the body with regard to research he is conducting on *Coronary Occlusion*, inviting members to refer clinical material.

Mr. Dickinson, representing the Postal Union Life Insurance, presented the plan of his company for group hospitalization insurance for semi-indigents. Dr. L. H. Fraser made a motion that his plan be referred to the Committee on Public Relations; this was seconded by Doctor McCullough, and carried.

The meeting was adjourned at 10:45, and was followed by the usual half-hour of friendly intercourse, with a buffet lunch.

CLARA H. SPALDING, *Secretary*.

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HUMBOLDT COUNTY

The Humboldt County Medical Society met on March 15 at the St. Joseph Hospital, Eureka, with the president, Dr. O. R. Myers, presiding.

Doctors Howard Markel, Montague S. Woolf, and Howard Lindner of San Francisco were the guest speakers.

Doctor Myers reported committees to handle legislation, education, recreation, White House Conference, Auxiliary, membership, Public Health League, entertainment, and public relations.

We received a very excellent paper by Dr. Montague Woolf on *Abdominal and Perineal Removal of the Rectum*.

The society voted to invite Dr. Langley Porter for the meeting of April 19 and to ask Doctor Porter to bring a gynecologist and obstetrician with him.

After a very enjoyable evening the meeting adjourned.

LAWRENCE A. WING, *Secretary*.

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MARIN COUNTY

The Marin County Medical Society met at the Marin Golf and Country Club on February 22.

Dr. T. E. P. Gocher gave an interesting discussion on application of different methods of *physiotherapy*.

Dr. H. F. Rogers of Petaluma was also present and outlined the political situation, which is of vital interest to all the doctors.

CARL W. CLARK, *Secretary*.

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ORANGE COUNTY

The Orange County Medical Association held its regular monthly meeting on March 6 at 8 p. m. in the Chapel of the Orange County Hospital. Doctor Huffman called the meeting to order.

Doctors E. F. Cain and H. C. Neslund were unanimously elected to membership.

Further discussion was held at some length on the *health insurance problem* of the Teachers' Institute of Orange County. It would appear that all the teachers are not in favor of such a plan. The consensus of opinion was that any such plan would have to represent the teachers 100 per cent and be favorable to every member of the County Medical Association. No official action being taken, the matter was referred back to the committee to await future developments.

The scientific paper of the evening was given by Dr. Verne Carlton Hunt of Los Angeles, who was at the Mayo Clinic as a surgeon for fifteen years. He chose as his subject *Tumors of the Colon and Rectum*. His talk was very enlightening, and he gave several valuable pointers on the preoperative technique for obstructions in the lower colon.

After considerable discussion the meeting adjourned.

WALDO S. WEHRLY, *Secretary-Treasurer*.

PLACER COUNTY

The Placer County Medical Society held its February meeting at the Freeman Hotel, Auburn, Saturday evening, February 17. The meeting was called to order by the president, Dr. L. B. Barnes.

There were present the following visitors: Dr. T. Henshaw Kelly, chairman of the Council of the California Medical Association, and Mr. Hartley Peart, general counsel of the California Medical Association, both of San Francisco; Doctors H. M. Kanner, Ernest Sevier, F. F. Gundrum, J. B. Harris, C. E. Schoff, and Frank Warne Lee of Sacramento, and Aaron Traum of Weimar.

The application of Dr. James F. McAnally of Roseville, for transfer from the Sacramento Society for Medical Improvement, was read. Doctor McAnally was unanimously elected to membership.

The application of Dr. Harry N. March of Grass Valley, for membership in the Placer County Medical Society, was read. Doctor March was unanimously elected to membership.

Following the reading of correspondence, the president called upon Dr. T. Henshaw Kelly, who addressed the society upon *The Functions of the California Medical Association*.

Doctor Kelly first discussed the organization of the California Medical Association and its relation to the component county societies and to the American Medical Association. He also touched upon the scientific programs and the functions of the House of Delegates at the annual sessions, stressing the opportunity for presentation of scientific papers by members, the reception of distinguished visitors from outside of California and also the advantages of the opportunity to make social contacts and friendships with men from different parts of the state.

He next discussed CALIFORNIA AND WESTERN MEDICINE, the official journal of the California Medical Association. He deplored the fact that so many members of the society failed to read the JOURNAL as they should and thus failed to keep in touch with the state of the profession and its activities.

Doctor Kelly then outlined the activities of the Association dealing with the social and economic aspects of medicine and its practice. Members of the Cancer Commission of the California Medical Association having recently visited our society, Doctor Kelly did not take up their work. However, he discussed the Committee on Public Relations and its activities in the development of hospitalization plans and its work in the correction of the abuse of county hospitals by non-indigent residents. Doctor Kelly also paid high tribute to the Committee on Public Policy and Legislation and its chairman, Dr. Junius B. Harris.

Doctor Kelly concluded his remarks by going into detail regarding the very active work which has recently been done in the matter of organization for the care of those under the Federal Relief Administration. He stated:

"For the first time the Government recognizes the right of physicians to be paid for services rendered to those on relief just as grocers and others are paid for their services and, through the State Relief Administration, asked that organized medicine aid in the formulation and execution of plans designed to provide medical care. General principles of the plans in California have been sent to your secretary and, as things are changing so fast, they do not need to take more time now."

Mr. Hartley F. Peart then addressed the society on *The Corporate Practice of Medicine*, of which address the following is a résumé:

"The corporate practice of medicine has two phases: First, the furnishing of medical and hospital services by municipal corporations, such as counties and cities, and, second, the furnishing thereof by corporations and lay persons. Doctor Kelly, in his address, has discussed the practices of supervisors in certain counties. The decision just rendered by Judge Van Zante, in the Kern County case, is a very sweeping victory for the view taken by the medical profession of the law, namely, that county hospitals are only open to the indigent sick and dependent poor and a few other

classes of sick and injured expressly defined by statute. San Joaquin County is an example of a county still taking the opposite position and in direct conflict with the statutes as construed by the court.

"The practice of medicine by corporations and the furnishing of medical services by corporations and lay persons is expressly prohibited by the law as construed by the Appellate and Supreme courts. The case of *People vs. Painless Parker*, sustaining this principle, recently decided by the Supreme Court, was a case involving a dentist, but is a case on all fours with the practice of medicine. The State Board of Medical Examiners has brought an action, which is now pending, to get a direct test in a case involving a doctor.

"The so-called hospital associations who contract to furnish the services of doctors in connection with hospital services are now faced with a recent ruling by the Attorney-General to the effect that hospital service contracts constitute health and accident insurance and that such corporations and associations must comply with the state insurance laws. Nearly all of these organizations operate for profit, which is wrong in principle and destructive of medical and hospital standards and practice. The activities of District Attorney Warren and the Grand Jury of Alameda County in this connection will furnish many illuminating facts on this problem.

"The California Medical Association is actively in touch with the whole question with the state departments involved and is expediting the completion of plans for the establishment of hospital service on a benevolent and nonprofit basis, the payment for which is made periodically by the patient whole in health."

Following general discussion of these most interesting and illuminating addresses, the meeting adjourned for refreshments.

ROBERT A. PEERS, *Secretary*.



SACRAMENTO COUNTY

A regular meeting of the Sacramento Society for Medical Improvement was held at the Elks Temple on the evening of November 21, 1933.

The meeting was called to order by the president, Dr. George Briggs at 8:30 o'clock.

The first paper of the evening was delivered by Dr. George Joyce Hall. His topic was the *Influence of Endometrial Transplants and some Hormones on Ovaries of Hysterectomized Mice*, and was the result of some original experimental work done by him. Animal experiments were conducted to determine relationship of endometrium to endocrine system. Technique of hysterectomies and endometrial transplants in albino mice and the dosage of hormones administered was described. Doctor Hall showed the effect of endometrial tissue under various conditions, and also showed the lutenizing effects of various prolans. He proved that the ovarian function was reduced following hysterectomy, and that ovarian function was brought back to normal in the hysterectomized animals by endometrial transplants and hormone administrations. In closing, Doctor Hall suggested practical therapeutic measures in treatment of neurotic symptoms of hysterectomized patients and pleaded for conservative uterine surgery. Doctor Hall's paper was illustrated by lantern slides of microscopic sections of mouse ovaries and uteri.

The second paper of the evening, *The Male Hormone*, was read by Dr. Harry Benjamin of New York City. The testes may produce more than one hormone; the one that controls secondary sex characteristics was the one under discussion by Doctor Benjamin. Doctor Benjamin stressed the point that the testis is the factory and not a storehouse of this hormone, which is continuously excreted and found only in the blood and urine. It is from the urine that the most active male hormone preparations have been made. He outlined the biological tests used, such as the comb test, and described the chemistry of this hormone. Doctor Benjamin, in closing, described methods of administering this hormone: (1) Autoplastic methods, such as the Steinach operation. (2) Implantation methods, which are not satisfactory. (3) Injection or ingestion of the

hormone itself. Doctor Benjamin's paper was well illustrated by lantern slides.

Discussion opened by Doctor Rulison and closed by Doctors George Joyce, Hall, and Benjamin.

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A regular meeting of the Sacramento Society for Medical Improvement was held the evening of January 16 at the Sacramento Hotel. The president, Dr. O. F. Johnson, called the meeting to order at 8:45 p.m. Sixty-three members were present.

The paper of the evening was read by Henry Walter Gibbons, M. D. Doctor Gibbons is medical director for the California and Western States Life Insurance Company and well qualified to talk on the *Rôle of Insurance in Medical Practice*. The paper was interesting and created a great deal of discussion. Those commenting on the paper were: Doctors Peers, Gundrum, Beattie, Foster, Scribner, Titus, Pitts, and Schoff.

The application for membership of Dr. G. W. Pallesen, and Dr. Max Brannan were read. This being the second reading of Dr. Max Brannan's application, he was balloted upon and accepted unanimously into membership.

Doctor Dick's letter was read regarding public speakers from medical ranks. Doctor Pulford suggested that the Cancer Committee coöperate with the Board of Directors to secure speakers before lay organizations. Doctor Schoff discussed the importance of this matter.

It was moved and seconded and carried that the secretary write to the City Manager regarding street signs to be placed on corners where they can be seen.

The president appointed the following members to act as the Public Relations Committee of the Sacramento Society for Medical Improvement for 1934: Doctors Frank MacDonald (chairman), Edward Babcock, Orrin S. Cook, G. Parker Dillon, and Nathan G. Hale.

The president appointed the following members to act on the Program Committee for 1934: Doctors Raymond Wallerius (chairman), W. J. Van den Berg, and H. W. Gibbons.

There being no further business the meeting adjourned to partake of light refreshments while Doctor Turner prepared his moving-picture projector. After a short recess, Doctor Turner showed interesting and amusing moving pictures of his recent trip to the Far East.

FRANKLIN WARNE LEE, *Secretary*.

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SAN BERNARDINO COUNTY

The San Bernardino County Medical Society held its regular meeting at the County Charity Hospital in San Bernardino on Tuesday, March 6.

The following resolution, which was passed at the last meeting of the Board of Directors, was read:

"This Council goes on record as never having approved or disapproved the actions of the Medical Advisory Board of the County Charity Hospital, that the only relationship between the county society and the Medical Advisory Board consists in the fact that members of the Medical Advisory Board are members of the county medical society."

Doctor Ullmann, state councilor, then gave a brief address.

The scientific program of the evening was as follows:

Dr. Louisa Bacon spoke on *Status Lymphaticus*. Discussion was opened by Doctors Abbott and London.

In the *Clinical Pathological Conference* that was next on the program, three cases were presented by Dr. Louisa Bacon, one of cancer of the lung, one of gas gangrene, and one of fibrosis pruritus and lobar pneumonia (both lungs).

Doctor Cutler presented a case of coccidioidal granuloma.

The meeting adjourned at 10:45 p. m., after which refreshments were served.

A. T. GAGE, *Secretary Pro Tem*.

SAN JOAQUIN COUNTY

The regular meeting of the San Joaquin County Medical Society was held in the Medico-Dental club-rooms on March 1. The meeting was called to order by Vice-President Hugh Bolinger at 8:15 p. m.

The committee appointed by President Gallegos on the amendments to the Constitution and By-Laws reported, through its chairman, Doctor Broadus, and indicated what changes they thought were necessary in the proposed amendments. Dr. D. Powell moved that the report be accepted and made an order of business at the next meeting; this was seconded by Doctor Doughty, and the motion was carried. Doctor Dozier moved that the secretary secure a proper number of the Code of Ethics of the American Medical Association so that each member might be furnished with one and one given to all members on their election to the society. This was seconded by Doctor Doughty, and the motion carried. Doctor McGurk, chairman of the committee on the x-ray schedule of the Napa County Medical Society, reported on their study of the fee schedule and moved that the fee schedule of the Napa County Medical Society receive the unqualified endorsement of the San Joaquin County Medical Society. This was seconded by Doctor Holliger, and the motion carried. A new Committee on Medical Economics and Social Problems was appointed by Doctor Gallegos. This committee consists of Doctors Frank Doughty (chairman), Chapman, Peterson, Broadus, and McGurk.

Dr. G. H. Rohrbacher, as secretary-treasurer of the county medical society, reported that there were still six members not paid up in their 1934 dues. He urged that these members make all possible effort to pay before the middle of March, because if these dues were not deposited with the California Medical Association in San Francisco by the first of April they would become automatically delinquent and would have to make new application for membership in the society, with payment of the current dues at that time.

The scientific program was opened by Dr. Frank Hinman of San Francisco, who spoke on *Some General Urological Problems, Particularly Infections of the Genital Organs*. This talk was illustrated by chalk drawings. Doctor Hinman sketched the best methods of diagnosis and treatment of these conditions, and warned particularly as to the dangers of overtreatment. He gave a very instructive résumé of the urinary anti-septics and stated very emphatically that nothing that has been produced in the laboratories surpasses the time-tried hexamethyl-tetra-amin, but stated that it must be given in at least 15-grain doses. The limitation in the use of this drug is that it must be given in an acid urine and that the drugs that produce an acid urine, the best of which is ammonium chlorid, if given in a sufficient amount produce the desired chemical change, but we very rapidly have a nausea and irritation of the bladder. He mentioned that for alkaline urine acriflavine should be used. This paper was discussed by Doctors Smythe, Lynch, Blackmun, and Hull.

Dr. Langley Porter, dean of the University of California Medical School, gave the paper that was scheduled for Doctor Carter. The subject was *The University of California Medical School and the Practitioner*. Doctor Porter briefly sketched the history of the Medical School from its inception in 1862 to the present day. He stated very emphatically that the Medical School and its facilities were ours, that we should avail ourselves of the help that the school, through its out-patient department, could give us in the diagnosis and treatment of obscure and borderline cases. He said that the school did not take patients that were well able to pay for consultation. He explained the social service investigations that are made before these patients are accepted for investigation and treatment. He said that, first, they should have a letter from the referring physician; second, that they must sign a form, which is a copy of a section of the San Francisco ordinance which makes it a misdemeanor punishable by law for any individual to receive treatment from a clinic if they are able to pay the fee schedule. They

are then investigated, having to furnish, in writing, a statement of their financial condition, such as income, obligations, insurance, lodges, dependents, and other pertinent facts. After this they must sign a request to their local bank which permits the bank to furnish information concerning their account, both savings and commercial, the total amount for the past year, the amount of stocks and bonds that they have had on deposit with the bank, and whether or not they rent a safe deposit box. After all these forms are signed, then the patient is admitted. The costs of investigation are very trivial, being kept to the absolute cost of the service rendered and the supplies used. When the complete work-up has been completed the patient is returned to his physician, and a copy of the work done at the University is sent with suggestions for treatment and diagnosis made. This was commented on by several members of the society, particularly Doctors McGurk and Thompson.

Dr. J. W. Toner, Director of State Institutions, paid a surprise visit to the society, and was called on for a few words. He briefly sketched the amount of money that was spent, the number of patients that were under state care, and the overcrowding of state institutions. He paid a very glowing tribute to Dr. Margaret Smyth, Superintendent of the State Hospital for the Insane at Stockton. He stated that it was neither his nor Governor Rolph's intentions to permit politics to enter into any phase of the care of the state charges.

There being no further business the meeting was adjourned and refreshments were served.

G. H. ROHRBACHER, *Secretary*.

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SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held on March 12 in the Bissell Auditorium of the Cottage Hospital at 8 p. m., with President E. L. Markthaler presiding.

Doctor Markthaler introduced the speaker of the evening, Dr. John V. Barrow of Los Angeles, who presented an extremely interesting and instructive paper on *Amebiasis*, illustrating his talk with microscopic motion pictures. He stressed particularly differential diagnosis, communicability, and treatment.

The paper was discussed by Doctors Shelton, Clark, McNamara, d'Alessio, Nuzum, Pierce, and Doctor Boyd of Los Angeles, who accompanied Doctor Barrow to Santa Barbara.

Following the scientific program, the society went into executive session.

Federal Food and Drugs Bill.—Doctor Means stated that Doctor Evans had given a talk to the Woman's Auxiliary of the County Medical Society on the new food and drugs bill which is under consideration by the Senate.

Doctor Ullmann moved, and it was seconded and unanimously carried, that the society give its most earnest support to any proposed federal and state legislation which gives jurisdiction over false advertising, prevents the sale of poisonous cosmetics, gives adequate control of poisonous and contaminated foods, requires the informative labeling of food and drugs, and gives adequate control of false curative claims for drugs.

Report of Public Relations Committee.—Doctor Henderson reported the following recommendations from the Public Relations Committee:

1. That the proposed plan of conducting the Santa Barbara County Dispensary at the Cottage Hospital be temporarily accepted.

2. That the president of the society appoint an emergency executive dispensary committee, the function of which shall be to staff and to aid in the organization of the Santa Barbara County Dispensary and to draw up such by-laws as are necessary for the perpetuation of this committee.

It was moved, seconded and carried, that the recommendations be adopted.

Doctor Markthaler then announced that he had appointed the following as a dispensary committee: E. L.

Markthaler (chairman), H. E. Henderson, Rexwald Brown, W. E. Johnson, and C. T. Roome.

Report of Medical Economics Committee.—Doctor Gray reported for the Medical Economics Committee, stating that this committee was attempting to formulate plans which would include:

1. Providing the patient with adequate care and hospitalization.

2. Getting the patient to the private physician's office.

3. Letting the patient have a free choice of physician.

4. Enabling the physician to receive a financial return which would at least equal the cost of the service.

5. Provided that the entire investigation and transaction can be handled by a social worker.

WILLIAM H. EATON, *Secretary*.

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SOLANO COUNTY

The regular meeting of the Solano County Medical Society was held at the Hotel Casa de Vallejo on Tuesday evening, March 13, at 8 p. m. The meeting was preceded by a dinner at which thirty-eight members were present. Dr. John W. Green, president of the society, presided.

Following the dinner the society was addressed by Dr. Sylvan L. Haas, chief surgeon of the Shriners Hospital in San Francisco, on the subject of *Surgical Aspects of Poliomyelitis*. In his talk Doctor Haas, in a most interesting manner, briefly described some of the diagnostic high points of poliomyelitis and told in detail the various procedures for surgical relief. He also showed a one-reel film of interesting clinical cases taken from actual cases in the Shriners Hospital in San Francisco. Following his talk, considerable discussion was carried on by the various members of the society.

The second talk of the evening was given by Dr. Hans Lisser, associate professor of medicine at the University of California. He chose as his subject *The Endocrine Disturbances of the Pituitary Gland*, which was illustrated by lantern slides of interesting clinical cases. Doctor Lisser presented this subject in a most instructive manner and the members secured a great deal of information from his very splendid address. His paper was discussed by the various members, and Doctor Lisser ended his talk by clearing up a great number of points on treatment of diseases of the pituitary gland.

Special guests of the evening were: Commander Richard Laning, chief surgeon of the Naval Hospital at Mare Island; Dr. C. W. Ross, chief of the medical staff at the Naval Hospital at Mare Island; Dr. F. O. Butler, superintendent of the Sonoma State Home; and Dr. Fred Alexander, resident physician of the Shriners Hospital of San Francisco.

Due to the extensive scientific program, the usual business meeting of the society was dispensed with.

The next regular meeting of the Solano County Medical Society will be held at the Hotel Casa de Vallejo on Tuesday evening, April 10.

AMBROSE J. RYAN, *Secretary*.

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SONOMA COUNTY

The regular monthly meeting of the Sonoma County Medical Society was held on March 6 at Green Mill, south of Cotati.

The guest speakers of the evening were: Dr. George G. Reinle of Oakland, president of the California Medical Association, who talked upon the work and aims of the state organization; Dr. B. W. Black of the Highland Hospital, Oakland, who spoke on the subject of *Malpractice*; and Dr. W. M. Dickie of Berkeley, who gave a résumé of the work of the Public Relations Committee of the State Association.

Regular business was transacted. Dr. C. B. Andrews of Sonoma was elected to membership. The applica-

tion of Dr. L. W. Hines of Santa Rosa was received and ordered to take the usual course.

The subject of an insurance plan for medical care was discussed at length, but no definite action was taken.

W. C. SHIPLEY, *Secretary*.



STANISLAUS COUNTY

The regular monthly meeting of the Stanislaus County Medical Society was held on Friday, March 9, at 820 Twelfth Street, Modesto.

Fourteen members were present. No business of importance was discussed.

The speaker of the evening was Dr. John Kline, who gave a very interesting lecture on *Ileus*.

R. D. HUSBAND, *Secretary*.



TULARE COUNTY

The regular monthly meeting of the Tulare County Medical Society was supplanted by the annual joint meeting with members of the legal profession, at which the Tulare County Medical Society acted as hosts to the Tulare County Bar Association.

About sixty-five members and guests were in attendance at the banquet, held at Motley's Café, in Visalia. Preceding the speaker of the evening, musical selections by a trio, Mrs. Leland Long, violinist, Mr. Leland Long, cellist, Mrs. Donald Fowler, pianist, and vocal selections by Mr. Emerson Button, accompanied by Mrs. Button, pianist, were delightfully rendered. The numbers were enthusiastically received by all present.

Dr. Donald Fowler, president, presided and introduced as guest speaker Dr. Fred Conzelmann, psychiatrist from the Stockton State Hospital, who delivered an address entitled, *Problems of Borderline Mental States*. This topic was a very apt one, and Doctor Conzelmann's points were exceptionally well chosen, with examples sufficient to raise the question of possible existing borderliners among his listeners, much to their enjoyment.

All agreed that an exceptionally entertaining evening resulted from the program.

Mr. Waldo E. Burford, vice-president of the Tulare County Bar Association, responded for the attorneys, thanking us for the privilege of being guests at this meeting.

KARL F. WEISS, *Secretary-Treasurer*.



VENTURA COUNTY

The regular meeting of the Ventura County Medical Society was held at the County Clinic building on Tuesday, February 13, Dr. Charles Smolt presiding.

Guests present were: Doctor Nuzum from Santa Barbara, Doctors Bradford and Lindbery from the county hospital staff.

Doctor Nuzum from Santa Barbara gave a most interesting talk on *Heart Disease*. He dwelt particularly on the clinical picture of angina pectoris, its causes and its treatment. His work with the new tissue extract in treating this disease was most interesting. A good discussion followed.

He also reported numerous matters of interest that were discussed at the last meeting of the Council.

Doctor Coffey announced a meeting of the Public Health League of California on Friday, February 16 at the Alexandria Hotel in Los Angeles. He urged as many to be present as possible. He also expressed thanks to the society, in behalf of the Public Health League, for the contribution voted last month.

The applications of Doctors MacCoy and Cody were approved by the state society, and these men were both voted in as members of the Ventura County Medical Society.

FRED A. SHORE, *Secretary-Treasurer*.

CHANGES IN MEMBERSHIP

New Members (48)

Alameda County.—Kathryn M. Kent, John L. Pasmore, Oscar P. Stowe, Maxwell Thebaut.

Fresno County.—Clarence M. Leggitt.

Humboldt County.—Charles C. Falk, Jr.

Los Angeles County.—Robert A. Campbell, Horace B. Cates, Lester M. Levy, Hart Litchfield, Floyd E. Neff, Henry R. Nesburn, Fred L. Scott, Edward A. Skaletar, Harold L. Snow, Lorenz M. Waller.

Marin County.—L. W. Breck, A. F. Gibberson, Roy R. Robertson, W. Scott Polland.

Placer County.—Harry N. March.

Riverside County.—William P. Forcade.

Sacramento County.—John P. Fabian.

San Benito County.—J. M. O'Connell.

San Diego County.—Loyd Thompson, James F. Chalmers.

San Francisco County.—Perry A. Bonar, Thomas G. Hall, Ray E. Harris, George S. Johnson, Lawrence M. Trauner, Arthur J. Williams, Thomas B. Wiper.

San Joaquin County.—Concessa L. Craviotto, James A. McHugh, Patrick H. McHugh, Frank G. Vieira, Jr.

San Luis Obispo County.—Elam D. Anderson, J. B. V. Butler.

Santa Clara County.—William H. Northway.

Santa Cruz County.—Joseph C. Johannes, Francis H. Poole.

Solano County.—L. A. Anthony, S. G. Bransford, R. W. Newman.

Sonoma County.—Gilbert L. Patterson, Leighton W. Ray, Paul T. Quarry.

Transferred (9)

William H. Barnes, from Alameda County to Butte County.

Henry C. Barron, from Los Angeles County to San Diego County.

L. M. Burke, from Butte County to Alameda County.

William F. Chamlee, from Fresno County to Kings County.

Carl E. Schultz, from Los Angeles County to Monterey County.

William E. Styan, from San Francisco County to San Mateo County.

F. W. Vowinkel, from San Francisco County to Alameda County.

John J. Weir, from San Bernardino County to Utah.

Joseph H. Woolford, from Sacramento County to Humboldt County.

Resigned (5)

Lillian Boldeman, from San Francisco County.

Clarence C. Porter, from San Francisco County.

Henry C. Rixford, from San Francisco County.

Salvatore Schiro, from San Francisco County.

Franco Urriolagoitia, from San Francisco County.

In Memoriam

Hildreth, Herman Lee. Died March 7, 1934, age 59. Graduate of Bennett Medical College, Chicago, 1900. Licensed in California in 1913. Doctor Hildreth was a member of the San Diego County Medical Society, the California Medical Association, and the American Medical Association.



Watkins, James Thomas. Died February 18, 1934, age 63. Graduate of Columbia University College of Physicians and Surgeons, New York City, 1894. Licensed in California in 1901. Doctor Watkins was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

CANCER COMMISSION*

REPORT OF COMMITTEE ON CONNECTIVE TISSUE TUMORS AND LEUKEMIAS

Connective tissue tumors are of two varieties: (1) benign, (2) malignant; taking their names from the tissues from which they originate: fibrous, fibroma and myxoma; fat, lipoma; nerve, neuroma; bone, osteoma; blood and lymph vessels, angioma. Malignant tumors which arise from any of these tissues are known as sarcomas and are frequently designated as fibrosarcoma, myxosarcoma, osteosarcoma, and angiosarcoma.

FIBROMA

Fibromas are found in the integument, subcutaneous and submucous tissues, viscera, and abdominal wall, etc. Many have their origin in nerve tissue (neurofibromas) and may be single or multiple (Von Recklinghausen's disease). Neurofibromas, especially the single deep variety, not infrequently are or become malignant.

Fibromas are little susceptible to radiation and are best treated by surgical excision. Actual excision of the tumor intact, together with a zone of surrounding normal tissue, is safer than simple enucleation; since some tumors, clinically innocent in appearance, are actually malignant, and even the benign tumors tend to recur if not completely removed.

LIPOMA

Lipomas occur (single or multiple) where fat tissue exists, most frequently in the subcutaneous areas of the neck, shoulders, back, buttocks, and upper extremities; but occasionally they are found in the mesentery, the submucous coat of the stomach and the intestines. They commonly require removal for cosmetic reasons, or on account of pain, as in Dercum's disease. A retroperitoneal group is important because it may contain embryonic elements that become malignant liposarcomas.

Surgical excision is the only effective treatment. Excision should be complete, as they are likely to recur if any fragments are left.

MYXOMA

Myxomas are connective tissue tumors with the structure of Wharton's jelly. True myxoma must not be confused with mucoid or gelatinous degeneration common in various benign and malignant growths. These tumors are potentially malignant, tend to recur locally or to metastasize, and should always be excised completely.

ANGIOMA

Angioma, arising either from blood or lymph vessels, occurs in the widest variety of locations and in the most varied forms; from the pin-head capillary type of the skin to extensive dermal nevi or subcutaneous progressive angiomas, or to deeper cavernous angiomas of almost any tissue or organ. The latter may be well localized or may extend irregularly about muscles and through fascial planes, or, as in so-called "hygroma," may involve the skin and deeper structures in the neck, axillae and groins. They occasionally are malignant.

Surgical excision of the larger angiomas is often difficult on account of hemorrhage, or by reason of their intimate interrelationship with surrounding structures, and is by no means without risk from infection of extensive lymph spaces opened. Methods which produce vessel obliteration, such as radium, are usually effective.

* The Cancer Commission was brought into being by the House of Delegates of the California Medical Association to aid in the furtherance of all efforts to combat cancer. The roster of officers and the central office of the Commission to which communications may be sent is printed in this issue of CALIFORNIA AND WESTERN MEDICINE (see front cover directory). This column is conducted by the Secretaries of the Commission.

ENDOTHELIOMA

The term includes a group of tumors derived from the lining cells of blood vessels, lymph vessels and serous cavities, such as the pleura and peritoneum. They commonly metastasize early, usually by way of the lymphatics, thus clinically differing from sarcoma. Such tumors arising from the pleura and certain other locations are radioresistant; those known as hemangioendothelioma, arising in bone, and those formed in blood and lymph vessels elsewhere, are occasionally radiosensitive.

SARCOMA

Sarcoma occurs in a variety of forms, from a very coarse fibrous, almost benign type, to a very cellular, friable and malignant form. Depending upon the degree of malignancy, some metastasize late, if at all, and may be cured by early excision. Others metastasize promptly and are seldom cured. Ewing says that osteogenic sarcomas constitute one of the most important departments of the science of tumors because they are characterized by frequent occurrence, loss of limbs, rapid metastasis, and rank with the most rapidly growing neoplasms. Therefore, the general practitioner should have a good knowledge of this group, and is referred to the "Report of the Bone Tumors Committee."

Diagnosis of Sarcoma.—Except in the case of sarcoma of bone or of some internal location, the symptom of onset is a lump or swelling. Early in its growth the lump is small, neither painful nor disabling, and clinically indistinguishable from the benign connective tissue tumors and from retention cysts, etc. In the presence of such lumps, sarcoma must always be kept in mind, since cure is often easy at this stage, but impossible in the presence of recurrence or metastasis following inadequate therapy. With increase in size, a reasonably certain clinical diagnosis may often be made.

A definite diagnosis between malignant tumors and the benign fibroma or neurofibroma cannot be made by clinical examination alone. The tumor must be widely excised and examined microscopically by a competent pathologist.

Attention is especially directed to a group of sarcomas, usually subcutaneous, which exhibit an astounding tendency to one or more local recurrences, after what appears to have been adequate excision. Some of this group metastasize late, and may finally be cured by extremely wide excision, even after recurrence. The serious nature of small, movable, subcutaneous tumors is most frequently overlooked, and a diagnosis of fibroma or even lipoma is made. Because of their innocent appearance, simple excision or only enucleation is performed under local anesthesia. Local recurrence is common, but in many instances the rate of growth is slow, while in others there is early pulmonary metastasis.

Biopsy, for small lumps, is condemned. Excision is safer, certain, and no more difficult, and lends itself to a more thorough study of the whole tumor microscopically. In the presence of large tumors, biopsy should be done only after other means of diagnosis have been employed (especially the Wassermann test), and then only if decision in favor of extensive resection or amputation depends on microscopic confirmation for diagnosis. Before resorting to biopsy, it is recommended that preoperative radiation be given, and for two reasons: first, to observe its therapeutic effect as manifested in shrinkage of the tumor; and, second, for the added safety believed to be afforded by preoperative radiation.

Treatment of Sarcoma.—The well-known facts of growth by peripheral expansion, infiltration, and metastasis through the blood stream to the lungs as the point of first localization, make treatment of the more malignant forms extremely difficult. If surgical removal is feasible (no distant metastases being demonstrable by clinical examination or by roentgen ray) it is the method of choice. When surgical resection is planned, preoperative radiation is recommended, to be

followed by postoperative radiation, depending on the completeness of the operation, the degree of malignancy, and the radiosensitiveness of the tumor as determined by the pathological report.

Susceptibility to radiation therapy varies with the tissue represented in the sarcoma (muscle, fat, cartilage, fibrous tissue, etc.); and no rule covering the entire group can be laid down. In general, radiation therapy is more or less successful in proportion to the degree of malignancy. The less malignant, more fibrous growths are little affected; the more malignant ones may be quite susceptible, but in the case of large, deep-lying tumors, recurrence with increasing radioresistance may take place.

BORDERLINE CONNECTIVE TISSUE TUMORS

This comprises a group of lesions of somewhat uncertain nature, possessing some of the characteristics of neoplasms as well as of chronic inflammatory conditions.

Giant cell tumor is a less common soft tissue tumor similar in histology and behavior to the giant cell tumor of bones. (See Bone Tumors Report.)

Xanthoma is a lesion composed of connective tissue cells containing lipoid droplets and cholesterol, giving a yellowish cast to the whole, commonly multiple but not malignant.

LYMPHOSARCOMA, HODGKIN'S DISEASE, AND THE LEUKEMIAS

These conditions are mentioned, not in the hope that early diagnosis offers chance of permanent cure, but because they give rise to tumor masses which must be differentiated from other neoplasms mentioned. Primary lesions are found in the bone marrow, spleen, and lymph nodes, and secondary deposits may exist in the liver, kidneys, lungs, skin and serous membranes.

The diagnosis of the leukemias is dependent on a careful blood study, but to differentiate the various lymph adenopathies it is necessary to resort to a lymph node excision and microscopic examination.

Radiation therapy is the treatment of choice in lymphosarcoma, Hodgkin's disease, and the chronic leukemias. This fact is also of considerable value in the differential diagnosis of inaccessible mediastinal and abdominal tumors, where diminution in size makes the diagnosis of lymphosarcoma or Hodgkin's disease fairly certain.

SUMMARY

1. Accessible (and hence more likely curable) connective tissue tumors present themselves first as lumps.
2. Clinical differentiation between benign and malignant lumps is difficult or impossible, and all lumps should be considered possibly malignant until proved benign.
3. Partial biopsy should be done only to confirm diagnosis immediately before extensive or mutilating surgery, and then usually after preoperative radiation.
4. Surgical excision is the method of choice looking toward cure in early cases, but pre- and postoperative radiation is regarded as advisable.
5. Radiation therapy offers more or less prolonged control in advanced cases (varying with histological type of sarcoma).

Emmet Rixford, Chairman,	Ernest H. Falconer,
San Francisco	San Francisco
J. A. Pollia, Secretary,	F. F. Gundrum,
Los Angeles	Sacramento
John Martin Askey,	Hall G. Holder,
Los Angeles	San Diego
Leroy H. Briggs,	J. H. Pettis,
San Francisco	Fresno
Lloyd Bryan,	A. Herman Zeiler,
San Francisco	Los Angeles
C. A. Dukes,	
Oakland	

C. M. A. DEPARTMENT OF PUBLIC RELATIONS*

Preventive Medicine—Your Participation †

During the past two decades noteworthy progress has been made in reducing the mortality from such diseases as tuberculosis, diphtheria, typhoid fever, smallpox, and other preventable causes. The public mind has been aroused to the necessity of community effort in the furtherance of such public health services. There is a real public demand that something be done to reduce the prevalence of communicable diseases and to improve the health tone of the growing child. In general, such objectives may be accomplished either through the expansion of official health departments which will employ physicians, dentists, and other technicians on a salary basis, or the same goal may be better reached by bringing into active coöperation the existing professional resources of the local community, both in the field of medicine and dentistry. The fulfillment of this last-mentioned program will require the hearty coöperation of the local health service, which acts as a stimulating agency in forcibly bringing to the attention of the public the need of such preventive services. Public health is but a summation of personal health, and the success of any effort to eliminate needless illness from preventive causes depends upon the success with which we can stimulate a personal interest on the part of each individual citizen, more especially the interest of the parent in the care of his or her child.

However, before the health educational program is vigorously pursued by the local health and education authorities, it becomes necessary to prepare the profession, first, with respect to the group plan, which should be under the control and supervision of the local medical society, and secondly, with regard to the technical procedures to be followed. The physician in private practice should be willing to subordinate his personal views to those of the plan sponsored by the organized profession. Failure to do so would result in misinterpretation on the part of the public.

If children are to be protected against diphtheria every coöperating physician must be acquainted with the technique of immunization and must be conversant with the accepted practices, he must know whether toxin-antitoxin or toxoid is to be used, he must have a knowledge of the reactions which may be expected in children at various ages, he must know the length of time for which protection is usually given, and must be prepared with answers for the numerous inquiries which will occur to the public mind.

A plan for the discovery of the early case of tuberculosis necessitates a complete understanding of the tuberculin test and its relative importance in relation to the x-ray examination of the chest and the general physical examination of the patient. Such a group plan involves a standardization in medical practice, such standards to be arrived at through group consultation and preferably controlled through the public health committee of the local medical society. In this manner the chances of misunderstandings arising on the part of the laity are minimized, especially in broadcasting the public health needs of the community.

Under the rural studies which have been sponsored by the W. K. Kellogg Foundation and the urban work as carried on by the Wayne County Medical Society, postgraduate conferences in the diagnosis, treatment, and prevention of communicable diseases have been used with significant results. In cities where clinical facilities are available, it is relatively easy to organize such postgraduate courses. Conferences of this character have been held in Detroit at the Herman Kiefer Hospital during the past five years, and have been

* An open forum for progress notes on the department's activities and for brief discussions on medical economics. Correspondence and suggestions invited. Address Walter M. Dickie, Room 2039, Four Fifty Sutter Street, San Francisco. This column is conducted by the Director of the Department.

† Reprinted from *Journal of Michigan State Medical Society*, February, 1934.

enthusiastically supported by the local medical profession. The attendance at the individual meetings has been anywhere from one hundred to three hundred physicians, and these conferences have generally been held each week during the winter months.

In Barry, Eaton, and Allegan counties, through the coöperation of the W. K. Kellogg Foundation, an opportunity has been afforded to send the local physicians to some large medical center for intensive postgraduate study where particular emphasis has been placed upon physical diagnosis, instruction in the handling of diseases of childhood and in preventive medical services. Of the seventy-two physicians practicing in these three counties, fifty-six have already benefited from such postgraduate instruction courses.

While we realize that all counties will not be blessed with such financial support as to make available this type of instruction, at large medical centers, this committee has arranged for the gradual extension of such postgraduate courses into the various counties of this state to be sponsored by the county or district medical society. Those who are interested may make application to the secretary of the state medical society and arrangements will be completed so that desirable instructors can be provided for this purpose.

The committee also feels that it is essential that the great majority of the local physicians should coöperate and manifest their interest by attending such medical conferences. Each local medical society has been requested to appoint a local public health committee whose function should be to inform all local doctors of the objective of such a program. If this is not done, it is difficult for the layman to differentiate between the physician who has prepared himself in accordance with a general group plan and the physician who is uninformed. In a large city as Detroit, it has been next to impossible to reach all physicians through such postgraduate conferences and consequently the county medical society, with the coöperation of the local health department, has employed a medical co-ordinator whose function is to reach the physician who is not wont to attend medical meetings.

This medical coöordinator, in contacting the physician in his own office, has explained the nature of the program, has indicated that the latter has a definite function which he can perform in the furtherance of the community health work and that by his participation he minimizes the need of making available services through public clinics. Therefore, it is seen that the first step in the suggested program of medical participation is a stimulation of the interest of every practicing physician so that he becomes aroused to the desirabilities of his taking an active part by providing health service through his own personal practice in his own office. In this manner, each physician develops a definite personal knowledge of the entire plan, becomes familiar with the community health needs, and is ready to accept his responsibility.

With the adoption of such a group plan the problem of carrying the story to the public becomes relatively simple. We have on one hand a prepared and qualified physician ready to serve the child by giving diphtheria immunization, smallpox vaccination, and periodic health examinations in his own office, and we have on the other hand a parent serving as custodian of a growing child who is in need of a definite preventive service. The problem is to bring about a contact between their child and the parent and the physician. This necessitates a well-defined program of health education which can be best handled through the agency of a full-time local health service which has a sympathetic attitude toward its relationship with the medical profession.

Experiences in certain cities, such as Detroit, St. Louis, Missouri, and Charleston, West Virginia, and in certain rural counties such as the three Michigan counties above referred to, indicate that such a program may be carried on with advantage not only to the medical profession, but to the individual citizen and to the local public health organization. The means employed in carrying on this education program will be discussed in the next communication sponsored by this committee.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION*

Letter of the Auxiliary President

The program for my visit with the auxiliaries of the south included a visit with Mrs. Faris and other members of the Convention and Hospitality Committee in Riverside, the convention city, to become acquainted with members of the Riverside auxiliary, as well as to get my bearings for the convention. The committee has a splendid entertainment prepared and all the details are being carefully completed.

Going to Riverside just meant going to the annual meeting place to finish the present regime and to install a new set of officers. After missing the road several times and prolonging the journey, we finally reached the city of Riverside with its broad streets flanked by beautiful trees and shrubbery and with the architectural beauty of the early romance of Southern California. It was at this point I was to receive the surprise of my life. Astounded by the grandeur and beauty of the Mission Inn, I could scarcely extend greetings to the splendid group of women awaiting me before expressing the enthusiasm that had taken possession of me. Entering the portals, I could feel the sentiment of a Spanish hospitality whose address of welcome was always "The house is yours," and in the same spirit the word of parting to the guest, "May happiness go with you." It would seem the art centers of a glorious past had been foraged, or all that keeps that past before us had been centered under the roof of this grand edifice. One cannot but be thrilled with the wonders of the Inn, the artistic architecture, the Mission towers, the collection of bells (gathered from many lands and carrying much historical significance), the rustic arbor covered with grape vines, the cloister music room, the international rotunda with its spiral stairway, the Spanish art gallery filled with paintings of Spanish artists, the Galleria with paintings by artists of many lands and of different periods, and so many other beautiful collections of art. May we build our faith in our auxiliary on loyalty and tradition as firm as the foundation on which this master edifice has been built, a master accomplishment of a master mind.

A little church a few steps away from the Inn has been provided for our meetings. This will furnish a splendid meeting place, and will relieve the facilities of the Inn for the meetings of the Medical Association.

Just one thought more. Before you leave this little city of Riverside, with the beauty of its growth of trees and shrubbery so well planned in years gone by, take the Mission Road to Mount Rubidoux. As we wended our way up this narrow pass I was reminded of Bayard Taylor's, "The Fight of Paso Del Mar"—

"When Pablo of San Diego
Rode down to the Paso Del Mar."

I asked Doctor Roblee if we should meet a car on the pass, would he fight it out as did Pablo and Bernel on their mules. He assured me he would be put to no such test of strength, as it was a one-way road.

In imagination, one could see the Indian who first viewed this panorama draw himself to his full height with his hand shading his eyes, alert, expectant of something, he knew not what, as he gazed up, down, across, and over, a smile cross his face, and hear him say, "Co co skookum illehe" (meaning home, fine country, better lands, etc.). As you wind around,

* As county auxiliaries to the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Thomas J. Clark, chairman of the Publicity and Publications Committee, 40 Ross Circle, Oakland. Brief reports of county auxiliary meetings will be welcomed by Mrs. Clark and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate one page in every issue for Woman's Auxiliary notes.

gazing down on the beauties of that vast country where the hand of man meets the mountains, and the mountains meet the skyline in one grand panorama of color and beauty, you feel indeed that "God fulfills himself in many ways." When you ascend the topmost heights of the mountain and find the pulpit and seats hewn from the mountain-top for the magnificent sunrise service held on Easter morning, a tradition of this romantic people, you feel the north and south of this great state should clasp hands across the broad expanse and say with Sir Walter Scott:

"Breathes there the man with soul so dead,
Who never to himself hath said,
This is my own, my native land!"

You are impressed with the spirit and the gallant courtesy that are extended by the doctors, their wives, Mrs. Richardson, who has presided over that Inn for more than half a century, the hostess, the management, all eager to carry out and maintain that reputation of chivalry, a spirit that manifests itself, is developed and maintained in this delightful place.

I am appreciative of the privilege of being president at this time, and hope that every auxiliary member who has not been to Riverside will go this year. Seeing our own State, as I have seen it, has given to me an appreciation and realization of the beauty of the extreme ends of the State which inspires the greatest desire for closer relationship. To those who have been south before, I know it will be a delight to have an opportunity to return. Meet with us at Riverside on April 29 for the convention. It will give me pleasure to greet you, I assure you.

MRS. A. M. HENDERSON.

1 1 1

State Board Meeting.—The State Board Meeting of the Woman's Auxiliary was held at Chapman Park Hotel, Los Angeles, February 15, Mrs. A. M. Henderson presiding. The necessary number of a quorum being present, the morning was devoted to routine business and the reports of officers and chairmen. The meeting adjourned for luncheon at 12:30. The members present were the guests of the Los Angeles auxiliary at luncheon. Mrs. Barrows, president, introduced the board members and extended them a very cordial welcome.

Dr. R. Manning Clarke and Mrs. A. M. Henderson each gave a very interesting address. After luncheon the board again convened, the afternoon session being spent mostly in discussing the plans for the coming convention and revisions of the Constitution and By-Laws.

Component County Auxiliaries

Contra Costa County.—The Woman's Auxiliary to the Contra Costa County Medical Society held their February meeting at the home of Mrs. Abbott Hedges in Richmond, Tuesday, the 13th. The president, Mrs. M. L. Fernandez, presided.

The chairmen for the year were appointed by the president: Mrs. Kaho Daily, program; Mrs. Melvin Bolander, membership; Mrs. James M. McCullough, Hygeia; and Mrs. W. S. Lucas, press and publicity.

Mrs. G. M. Bumgarner was made an honorary member. During the session the dues were voted raised from \$1 to \$2.

Mrs. U. S. Abbott read an article from the February 1933 *Ladies' Home Journal*, "Political Medicine," by Loring Shuler. Mrs. Kaho Daily gave a very interesting report of the meeting of the Woman's Auxiliary to the Alameda County Medical Society, to which a delegation of the local society visited.

Mrs. W. E. Cunningham presented a lovely musical program, after which delightful refreshments were served by the hostess.

There were nine members present and two guests.

HELEN WEIL, *Secretary*.

1 1 1

Los Angeles County.—The year's program of the Woman's Auxiliary to the Los Angeles County Medical Association, under the leadership of Mrs. John V. Barrow, opened on January 30, with the president's

tea at her home, 142 South Windsor Boulevard. From 2:30 to 5 o'clock its large and inviting lovely rooms, which mirror so well the gracious Spanish charm of their hostess, were thronged with members and guests greeting old friends and new, and eager to learn of coming plans and projects.

On February 13 the Los Angeles auxiliary board entertained at lunch, in the Chapman Park Hotel, the state president, Mrs. Andrew Mitchell Henderson of Sacramento, the president-elect, Mrs. Philip Schuyler Doane of Pasadena, and other visiting state officers and councilors. As hospitality chairman, Mrs. A. Brockway displayed her characteristic flair for friendly efficiency, which makes each affair in her charge a delight to all attending it. Dr. Manning Clarke, as representative of the County Medical Association here, brought their greetings and encouragement, and Mrs. Henderson told for us some reminiscences of a medical pioneer in the Sacramento Valley and spoke of the mile-posts of progress made in the span of a single lifetime. Mrs. James K. Lytle of the Parent-Teacher Association outlined the work in one of the great city clinics maintained by them here for the less fortunate children, an amazing record of the highest medical and social service.

The regular February meeting was held on the 27th, when more than two hundred members from all parts of the county lunched together at the Mona Lisa Restaurant. On the program following, Mrs. J. M. Ashley presented briefly current health problems, and Mrs. Philip Schuyler Doane gave a spirited fifteen minutes of *Labels, Lies, and Legislation*, in defense of the Foods, Drugs and Cosmetics Bill now up for consideration in Washington, D. C. Then, as principal speaker of the afternoon, came James E. Davis, Chief of Police of Los Angeles, who in a fine, clean-cut, straightforward talk told of police and crime problems.

MRS. ELMER BELT,
Corresponding Secretary.

1 1 1

Riverside County.—Miss Anna K. Volger, superintendent of the Community Hospital, was the speaker Monday evening at the meeting of the Woman's Auxiliary to the Riverside County Medical Society, which convened at the hospital. Miss Vogler gave an interesting talk on the work being done at the hospital.

Mrs. A. W. Walker, president, presided at the meeting, which was followed by a social hour. Hostesses for the evening were: Mrs. P. F. Thureson, Mrs. W. E. Gardner, and Mrs. B. E. Garrison. A good attendance marked the meeting.

1 1 1

Sacramento County.—The regular March meeting of the Woman's Auxiliary to the Sacramento Society for Medical Improvement was held at the home of Mrs. C. B. Jones, 1523 N Street, with approximately forty members present.

A short business meeting was held and delegates for the state convention at Riverside were elected as follows: Mesdames J. B. Harris, C. B. Jones, Harry Kanner, and E. S. Babcock. Alternates were: Mesdames N. G. Hale, L. B. Barnes of Newcastle, William M. Miller of Auburn, Leo Farrell of Sacramento.

The work of helping needy families was discussed and practical aid was pledged by all members present, with donations of canned goods.

After the business meeting Mr. John Plover, State Superintendent of Probation, in reference to relief work, was introduced by our state president, Mrs. A. M. Henderson. Mr. Plover spoke most interestingly on the work in the institutional phases.

Mrs. Genevieve Freidenthal, social welfare worker at the Sacramento orphanage, answered questions on the work at the orphanage.

After the program, bridge was enjoyed and then refreshments were served by Mrs. Jones, assisted by Mesdames H. Kanner, Hilding, Johnson, Louis Barnett, J. L. Mullen, and Charles Vanina, Jr.

MRS. FRANK P. BRENDL,
Corresponding Secretary.

NEVADA STATE MEDICAL ASSOCIATION

D. A. SMITH, Mina President
 E. E. HAMER, Carson City.....President-Elect
 J. N. VAN METER, Las Vegas First Vice-President
 W. H. FROLICH, East Ely Second Vice-President
 HORACE J. BROWN, Reno.....Secretary-Treasurer

WASHOE COUNTY

The Washoe County Medical Society met on the evening of March 13 in the City Hall at eight o'clock. The meeting was called to order by Doctor Paradis, president.

Under the head of "business," the society heard a report by the Board of Censors, who at the preceding meeting were directed by the president to investigate and report upon the so-called children's clinic held in the Babcock Kindergarten Building, Reno. Following the adoption of the report, on motion by Doctor Servoss and seconded by Doctor Shaw, the chair appointed a committee, composed of Doctors Harper, Samuels, and Maclean, to confer with the committee to be appointed by the Nevada Public Health Association, and that this committee should confer, if necessary, with the CWA or such other similar organizations with reference to the establishment of a regular child's clinic, working in conjunction with the Nevada Public Health Association and working under the direction of the Washoe County Medical Society. This committee is to report its findings and conclusions at the next regular meeting of the society.

Doctor DaCosta, who had been appointed at a previous meeting to investigate a form of medical insurance for physicians' collections, said that, after due investigation and conference with other members of the committee, the plan presented for investigation did not appear to be practical and suggested that the matter be dropped. Upon motion, duly seconded and carried, the president ordered the matter dropped.

In a further communication, Dr. M. R. Walker, who is health physician for the Reno public schools, gave an excellent review of the school child's health problem. He said, in his opinion, that it was his belief that the whole matter of child welfare could best be handled by the family physician in coöperation with whatever other agency that existed for the benefit of the child's health. The greatest problem, as Doctor Walker saw, for benefiting the school child, is to be solved by proper immunization. Immunization has controlled smallpox, typhoid, diphtheria, and scarlet fever. And let us hope that soon measles, mumps, and goiter will fall under the ban of immunization, to the great benefit of the child and of the future generation.

Dr. Frank Samuels followed with an interesting paper on *Diagnosis of Tuberculosis in Children*. He referred chiefly to the article of L. F. Hill on childhood tuberculosis from the *Journal of Pediatrics*, in which the following was said:

"There has come into being in the last several years a revision of thought concerning childhood tuberculosis and the possibilities of using this knowledge in furthering the control of adult tuberculosis.

"The general practitioner treats the majority of children, and he has probably ill used the knowledge that childhood tuberculosis is very different from the adult form. In the child the first infection of the tubercle bacilli finds a virgin soil, and the pathology of the lung is a rather diffuse lesion, located at any portion of the lung. The tracheobronchial nodes are always involved. Symptoms may be practically negligible. Except in infants less than eighteen months old, it is the rule that healing occurs, leaving practically no scars except calcification of the original foci, called the Gohn tubercle, and calcification of the tracheobronchial nodes, this being the primary complex of the disease. The adult type of the disease is, in the vast majority of cases, probably a reinfection on soil that may have been rendered allergic by the first infection.

"In the diagnosis of childhood tuberculosis the history of contact, the tuberculin test, and the roentgenogram, are of more importance than relying upon the physical examination. The Mantoux tuberculin test is the one of choice; 0.1 milligram is a safe initial dose. The test is 90 per cent efficient, and will be found positive in approximately 25 per cent of children ten years of age. This in itself is proof of the child's ability to cope with this first infection.

"The greatest mortality of adult tuberculosis occurs in the age group of fifteen to twenty-five, and in the majority of these patients it can be proved that they had a childhood infection. The child recovering from infection can be supervised, and can probably be prevented from acquiring a second infection. This is the weapon that may in the future accomplish as much in controlling tuberculosis as early diagnosis of adult cases is accomplishing today."

Dr. W. A. Shaw led the discussion. The summary of interest produced by these discussions was that the Washoe County Medical Society will see that a child's clinic is instituted in the new Washoe County Hospital, where children can have the advantage of a consulting staff of the entire personnel of the Washoe County Medical Society, together with such supplementary aides as the x-ray and the laboratory, and any other means for assisting in the restoration of the child's health.

THOMAS W. BATH, *Secretary*.

United States Interstate Quarantine Regulations Amended.—The Secretary of the Treasury has announced the following amendments, Nos. 3 and 4, to the United States Interstate Quarantine Regulations of the Public Health Service. Amendment No. 3 specifies the diseases which shall be regarded as contagious and infectious, and reads as follows:

1. For the purpose of interstate quarantine the following diseases shall be regarded as contagious and infectious diseases within the meaning of Section 3 of the Act approved February 15, 1893: plague, cholera, smallpox, typhus fever, yellow fever, typhoid fever, paratyphoid, dysentery, pulmonary tuberculosis, diphtheria, leprosy, scarlet fever, measles, whooping-cough, epidemic cerebrospinal meningitis, anterior poliomyelitis, Rocky Mountain spotted or tick fever, syphilis, gonorrhea, chancroid, anthrax, influenza, pneumonia, epidemic encephalitis, septic sore throat, chickenpox, rubella, and psittacosis.

Amendment No. 4, which deals with the transportation of parrots, parrakeets and other birds of the psittacine family, reads as follows:

15½. No person, firm or corporation shall offer for shipment in interstate traffic, and no common carrier shall accept for shipment or transport in interstate traffic, any parrot, parrakeet, love bird, macaw, cockatoo, lory, lorikeet, or any other bird of the parrot or psittacine family, unless an accompanying certificate has been obtained from the state health authority to the effect that to the best of the knowledge and belief of such authority such bird as may be offered for shipment has originated from an aviary, or other distributing establishment, free from psittacosis infection, as determined by inspection of birds and the environment in which they have been reared and housed, the history of such establishment as regards psittacosis infection, supplemented by such laboratory examination of birds, selected by a representative of the certifying authority, as may be deemed necessary to enable the certifying authority to determine that the birds offered for shipment are free from psittacosis infection; provided, that no bird of the species above mentioned that is under eight months of age shall be offered or accepted for shipment or transport in interstate traffic.

Certificates accompanying shipment of psittacine birds transported under provisions of this section shall be surrendered by the common carriers to the health authorities at the destination of the shipment.

MISCELLANY

Under this department are ordinarily grouped: News; Medical Economics; Correspondence; Twenty-five Years Ago column; Department of Public Health; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings

American College of Physicians, Chicago, April 16 to 20, 1934. Mr. E. R. Loveland, Executive Secretary, 133 South Thirty-sixth Street, Philadelphia.

American Medical Association, Cleveland, Ohio, June 11 to 15, 1934. Olin West, M. D., Secretary, 535 North Dearborn Street, Chicago, Illinois.

California Medical Association, Riverside, April 30 to May 3, 1934. Emma W. Pope, M. D., Secretary, 2004 Four Fifty Sutter, San Francisco.

Southern California Medical Association, Santa Barbara, April 6 to 7, 1934. Robert W. Langley, M. D., Secretary, 1002 Wilshire Medical Building, Los Angeles.

Western Branch Society American Urological Association, Los Angeles, April 27 to 29, 1934. George W. Hartman, Secretary, 999 Sutter Street, San Francisco.

Medical Broadcasts*

American Medical Association Health Talks.—A new program arrangement has been concluded through the courtesy of the Columbia Broadcasting System for a weekly broadcast on the Educational Forum from 4:30 to 4:45 p. m., central standard time, each Thursday, beginning February 1.

The plan of the program is a ten-minute health talk, preceded and followed by selections by the studio orchestra.

The American Medical Association broadcasts each Monday afternoon from 4 to 4:15 p. m., central standard time (2 p. m., Pacific standard time), over the network of the National Broadcasting Company.

The American Medical Association broadcasts on Tuesday and Thursday morning from 8:55 to 9 a. m., central standard time, over Station WBBM (770 kilocycles, or 389.4 meters).

San Francisco County Medical Society.—The San Francisco County Medical Society broadcast program for the month of April is as follows:

Tuesday, April 3—KJBS, 11:15 a. m., and KFRC, 1:15 p. m. Subject: Convulsions in Infancy and Childhood.

Tuesday, April 10—KJBS, 11:15 a. m., and KFRC, 1:15 p. m. Subject: The Children Are Cross.

Tuesday, April 17—KJBS, 11:15 a. m., and KFRC, 1:15 p. m. Subject: Infantile Paralysis.

Tuesday, April 24—KJBS, 11:15 a. m., and KFRC, 1:15 p. m. Subject: Cigaret-Smoking—How It Affects the Boy.

Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of April is as follows:

Tuesday, April 3—KECA, 11:15 a. m. Subject: Health Talk.

Thursday, April 5—KFAC, 9:15 a. m. Subject: Your Doctor and You.

Saturday, April 7—KFI, 9:15 a. m. Subject: Health Talk.

Tuesday, April 10—KECA, 11:15 a. m. Subject: Health Talk.

* County societies giving medical broadcasts are requested to send information as soon as arranged (giving station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

Thursday, April 12—KFAC, 9:15 a. m. Subject: Your Doctor and You.

Saturday, April 14—KFI, 9:15 a. m. Subject: Health Talk.

Tuesday, April 17—KECA, 11:15 a. m. Subject: Health Talk.

Thursday, April 19—KFAC, 9:15 a. m. Subject: Your Doctor and You.

Saturday, April 21—KFI, 9:15 a. m. Subject: Health Talk.

Tuesday, April 24—KECA, 11:15 a. m. Subject: Health Talk.

Thursday, April 26—KFAC, 9:15 a. m. Subject: Your Doctor and You.

Saturday, April 28—KFI, 9:15 a. m. Subject: Health Talk.

Doctor Parrish Appointed Health Officer of City of Los Angeles.—Dr. George Parrish was appointed city health officer of Los Angeles February 15, 1934, to succeed Dr. C. W. Decker, who has held office for a little more than two years. Doctor Parrish returns to head the department over which he presided for a long period of years, he having succeeded Dr. Luther M. Powers upon the death of the latter.

Four Lectures by Professor A. Bielschowsky.—Professor A. Bielschowsky, director of the University eye clinic in Breslau, is to give a series of four lectures in San Francisco on the evenings of April 12 to 14 on the subject of "The Pathology, Diagnosis, and Treatment of the Motor Palsies of the Eyes of Organic and Functional Origin." This subject, of which Professor Bielschowsky is a master, should appeal to all men practicing ophthalmology and neurology.

Each lecture will consist of one-hour lecture, followed by a second hour of demonstration of cases brought to the lecture by the participants.

Those interested in attending these lectures are requested to communicate with Dr. K. Pischel, 490 Post Street, San Francisco.

Meeting of Southern California Medical Association. The program of the semiannual meeting of the Southern California Medical Association, held in Santa Barbara on April 6 and 7, included the following addresses.

Insulin in the Treatment of Food Allergy—P. A. Gray, M. D., Santa Barbara.

Follutein in the Treatment of Selected Cases of Headache—William M. Moffat, M. D., Santa Barbara.

Collectivism in Medicine—A Movement Which Should Be Promoted—Rexwald Brown, M. D., Santa Barbara.

The Treatment of the Anemias—Cyrus Sturgis, M. D., Professor of Medicine, University of Michigan.

Phytobezoar Associated with Gastric Ulcer—Francis B. Settle, M. D., Long Beach.

Dysovulation—Samuel Hirshfeld, M. D., Los Angeles.

Cancer of the Cervix (with Moving Picture Demonstration).—C. Hiram Weaver, M. D., Los Angeles.

Thorium Dioxid as a Diagnostic Aid—Noel F. Shambaugh, M. D., Los Angeles.

Agranulocytic Angina—Its Relationship to Certain Drugs—Cyrus Sturgis, M. D., Professor of Medicine, University of Michigan.

Red Hair and Its Relation to Allergy—Charles C. Coghlan, M. D., Los Angeles.

Split Skin Grafts—Will L. Miles, M. D., Los Angeles.

A Study of Abdominal Adhesions—Rea Smith, M. D., Los Angeles.

Some Important State Election Dates

March 21—Registration books open for primary election.

May 31—First day upon which candidates for office may file their nominations.

June 23—Last day upon which candidates for office may file their nominations.

July 17—Last day for filing initiative petitions. One hundred and eleven thousand valid signatures are required to place an initiative measure upon the ballot.

July 18—Last day for registration for the primary election.

August 28—Primary election.

September 27—Last day of registration for the general election.

November 6—General election.

Query.—Are you registered?

Public Meeting.—On Monday evening, April 30, a program planned for the lay public will be presented at the Municipal Auditorium, Riverside, sponsored by the Cancer Commission and the Woman's Auxiliary.

The program will be as follows:

What the California Medical Association is Doing About Cancer—Alson R. Kilgore, secretary of Cancer Commission.

The Use of X-Ray and Medical Diagnosis—John D. Camp, Mayo Clinic.

The Arthritis Problem—Russell L. Cecil, Cornell University.

The Benefits of Preventive and Curative Medicine—F. M. Pottenger, Monrovia.

Presiding officers, Bon O. Adams, Riverside, and Mrs. A. M. Henderson, president, Woman's Auxiliary.

Thomas W. Salmon Memorial Lectures.—Dr. Charles Macfie Campbell, professor of psychiatry at Harvard Medical School, Harvard University, and medical director of the Boston Psychopathic Hospital, has been selected to deliver the 1934 series of Salmon Memorial Lectures on April 13, 20, and 27, 1934, at 8:30 p. m., at the New York Academy of Medicine, 2 East 103d Street. The lectures will be devoted to the consideration of "Trends in Psychiatry."

The contents of the three lectures follows:

Lecture 1. *Trends in Psychiatry.* A discussion of the various methods of approach during the past thirty years and of the varying emphasis laid by different individuals on different factors in the whole field. Reference to the importance of histopathology, the infectious theory, the biochemical investigations, psychoanalysis, Meyer's broad and well-integrated formulation. This lecture would be a discussion of trends with some evaluation of the drift of opinion.

Lecture 2. *Classification Versus Dynamic Analysis.* A presentation of factual material with analysis into subgroups; review of the actual stuff of life presented by these subgroups. Subordination of classification and verbal discussion to observation and reduction of the concrete problem to biological components and situational factors.

Lecture 3. *Conclusions and Suggestions.* The orientation with regard to the field outlined in the first lecture and the review of the actual stuff of psychiatric work may suggest certain practical conclusions and may indicate directions of theoretical investigation.

The Salmon Lectures have as their keynote, not detached scientific investigation, but a contribution to social welfare.

American College of Surgeons.—The American College of Surgeons held its California-Nevada section meeting on March 13-14, 1934, in Los Angeles, with headquarters at the Biltmore Hotel.

Surgical clinics were held on Tuesday and Wednesday mornings at the following hospitals: California Hospital; Cedars of Lebanon Hospital; Children's Hospital; Hospital of the Good Samaritan; Hollywood

Hospital; Methodist Hospital; Orthopedic Hospital; Queen of Angels Hospital; St. Vincent's Hospital; and White Memorial Hospital.

The two general scientific meetings, with Dr. C. G. Toland of Los Angeles presiding on Tuesday and Dr. Rexwald Brown of Santa Barbara presiding on Wednesday, had as guest speakers the following well-known physicians from the East: Robert B. Greenough, M. D., Boston, consulting surgeon, Massachusetts General and Collis P. Huntington Memorial hospitals; Allen B. Kanavel, M. D., Chicago, professor of surgery, Northwestern University Medical School; Thomas M. Joyce, M. D., Portland, associate clinical professor of surgery, University of Oregon Medical School; George Crile, M. D., Cleveland, director of Cleveland Clinic Foundation; and Frederic A. Besley, M. D., Chicago.

In addition to addresses by these eastern guest speakers, papers were read by the following California physicians: Howard C. Naffziger, M. D., San Francisco; George Thomason, M. D., Los Angeles; Charles A. Dukes, M. D., Oakland; and Carl W. Rand, M. D., Los Angeles.

Two scientific eye, ear, nose and throat meetings were held, the presiding chairman on Tuesday being George H. Kress, M. D., of Los Angeles, and the presiding chairman on Wednesday being Franz Brandt, M. D., of Los Angeles. The guest speakers were: Edward H. Cary, M. D., Dallas, professor of ophthalmology and otolaryngology, Baylor University College of Medicine; Gordon B. New, M. D., Rochester, professor of rhinology, laryngology and stomatology, Mayo Foundation.

California members of the College who were on the program were the following: Clifford Walker, M. D., Los Angeles; William A. Boyce, M. D., Los Angeles; Joseph M. McCool, M. D., San Francisco; and Emil Tholen, M. D., Los Angeles.

Cancer Clinics were held at the Hollywood Hospital on Tuesday, March 13, and at the California Hospital on Thursday, March 15.

Hospital Conferences, consisting of round-table conferences and discussion of administrative, professional and economic problems, were conducted by Robert Jolly of Houston, Texas, president-elect of the American Hospital Association, and by Malcolm T. MacEachern, M. D., Chicago, associate director, American College of Surgeons and director of hospital activities.

An extensively attended Community Health meeting was held at the Shrine Civic Auditorium on Wednesday evening, March 14, some seven thousand citizens filling every seat in the auditorium. The complete program of that evening follows:

The American College of Surgeons—Its Message for You, by Franklin H. Martin, M. D., Chicago, director general, American College of Surgeons.

A Century of Progress in Scientific Medicine, by George Crile, M. D., Cleveland, director, Cleveland Clinic Foundation.

Cancer—It Is a Curable Disease, by Robert B. Greenough, M. D., Boston, president-elect, American College of Surgeons.

Progress in Medical Science, by Allen B. Kanavel, M. D., Chicago, professor of surgery, Northwestern University Medical School.

Saving Your Eyesight, by Edward H. Cary, M. D., Dallas, professor of ophthalmology and otolaryngology, Baylor University College of Medicine.

Periodic Physical Examinations, by Thomas M. Joyce, M. D., Portland, associate clinical professor of surgery, University of Oregon Medical School.

Care of the Mouth, by Gordon B. New, M. D., Rochester, professor of rhinology, laryngology, stomatology, Mayo Foundation.

Infantile Paralysis, by Frederic A. Besley, M. D., Waukegan, professor of surgery, Northwestern University Medical School.

Doctors, Patients, and Hospitals, by Robert Jolly, Houston, president-elect, American Hospital Association.

Good Hospital Care—Talking Motion Picture, presented by Malcolm T. MacEachern, M. D., Chicago, associate director, American College of Surgeons.

Pacific Coast Surgical Association.—At the last meeting of the Pacific Coast Surgical Association, which was held at Gearhart, Oregon, February 23 and 24, the following officers were elected: President, Dr. E. C. Moore of Los Angeles; first vice-president, Dr. Park Weed Willis of Seattle, Wash.; second vice-president, Dr. Leroy Sherry of Pasadena; secretary-treasurer, Dr. Edgar L. Gilcreest of San Francisco.

The next meeting of the association will be held February 20 to 24, 1935, at Palm Springs. There will be two days of clinics in Los Angeles preceding this meeting.

Public Health League of California.—The Public Health League of California has been extending rapidly into all counties of the State. Organization work has radiated from the two business offices of the League—438 Chamber of Commerce Building, Los Angeles, and 450 Sutter Street, San Francisco. Leaders of the League in northern California are William C. Voorsanger, M. D., president; Raoul H. Blanquie, D. D. S., vice-president, and Glenn F. Cushman, M. D., secretary-treasurer. A board of twenty-one directors has been selected to represent the medical and dental professions in San Francisco, and a Northern California Executive Committee will be established as soon as county branches are completed.

In Southern California, Glenn E. Myers, M. D., is president; Russell W. Force, D. D. S., vice-president; Charles A. Reagan, D. D. S., secretary; and Robert A. Walker, M. D., treasurer, with a board of nine directors. The advisory board is made up of the local county chairmen and an additional group of leaders in organized medicine and dentistry.

SOUTHERN CALIFORNIA BRANCHES.—The roster of county organizations south of the Tehachapi follows:

San Diego County.—Luell Kinney, M. D., president; Harvey Stallard, D. D. S., vice-president; Mollie E. Fitzgerald, R. N., vice-president; and E. A. Blondin, M. D., secretary.

Imperial County.—John L. Parker, M. D., chairman.

Orange County.—E. H. Kersten, M. D., chairman; C. V. Schutz, D. D. S., secretary.

Riverside County.—W. H. Gardner, M. D., Chairman; Mary Catharine Baldwin, M. D., secretary.

Ventura County.—G. C. Coffey, M. D., chairman.

Santa Barbara County.—E. L. Markthaler, M. D., chairman.

San Bernardino County.—A. E. Varden, M. D., chairman.

Kern County.—Louis A. Packard, M. D., chairman; Seymour Strongin, M. D., secretary.

Los Angeles City Metropolitan Unit.—John V. Barrow, M. D., chairman; Charles A. Reagan, D. D. S., secretary.

Long Beach Branch.—Greg Hoskins, M. D., president; Ernest Lawing, D. D. S., vice-president; Dwight C. Sigworth, M. D., secretary.

NORTHERN CALIFORNIA BRANCHES.—Intensive organization has been carried out in San Francisco, with chairmen and lieutenants from the medical and dental professions in each assembly district.

Alameda County.—Frank C. Baxter, M. D., is chairman of the organization committee, with the following additional physicians as members of the committee: A. A. Alexander, B. W. Black, F. H. Bowles, Daniel Crosby, C. A. Dukes, O. D. Hamlin, Henning Koford, Guy Liliencrantz, J. L. Lohse, F. R. Makinson, W. E. Mitchell, Gertrude Moore, G. G. Reinle, Dexter N. Richards, W. H. Sargent, R. T. Sutherland, Clifford Sweet, Don D. Weaver. Wilfred H. Robinson, D. D. S., is chairman of the dental organization committee in Alameda County.

Amador County.—B. C. Kern, M. D., chairman.

Humboldt County.—Lane Falk, M. D., chairman.

Stanislaus County.—John A. Cooper, M. D., chairman; Hans Hartman, M. D., secretary.

Membership contacts have been established in the following counties, to be followed shortly by organization of county branches: Butte, Del Norte, Fresno, Lassen, Marin, Mendocino, Nevada, Placer, Siskiyou, San Joaquin, Santa Cruz, Shasta, Sonoma, Tulare, and Yuba.

Doctor Dunshee Appointed California Director of Public Health.—Dr. Jay Dee Dunshee, for several years health officer of the city of Pasadena, on March 17 was appointed Director of Public Health of the State of California by Governor James Rolph.

Annual Meeting of the American Association on Mental Deficiency.—The annual meeting of the American Association on Mental Deficiency will be held at the Hotel Waldorf-Astoria, New York, May 26, 27, 28 and 29. The Saturday session, May 26, will be given over to the sociological, psychological, and the special educational aspects of the problem in order that local social workers and school teachers may have an opportunity to attend without interfering with their regular duties. The Tuesday afternoon session will be a conjoint meeting with the American Psychiatric Association. Data as to the program may be obtained from the secretary, Dr. Groves B. Smith, Godfrey, Illinois.

New York Polyclinic Medical School and Hospital. Special lectures and papers at New York Polyclinic Medical School and Hospital: On Wednesday, March 14, was given a special lecture by Dr. Russell L. Cecil, professor of internal medicine, New York Polyclinic Medical School and Hospital, on "Rheumatic Fever": Incidence and predisposing factors. The rôle of the streptococcus in rheumatic fever. Focal infection. Relation of rheumatic fever to bacterial endocarditis and rheumatoid arthritis. The heart in rheumatic fever. Modern treatment and prophylaxis.

On Monday, March 5, the stated meeting of the Clinical Society of the New York Polyclinic Medical School and Hospital was held, with the following program:

The Educational Program of the American Medical Association, by William D. Cutter, M. D., of Chicago. Discussion was opened by John A. Hartwell, M. D., and Harold Rypins, M. D.

Western Hospital Association.—In view of the many pertinent topics of mutual concern of all groups interested in the future of treatment service, a joint conference of allied organizations will be held in connection with the eighth annual convention of the Western Hospital Association in Sacramento, April 9-13, 1934.

The three California nursing organizations and the California, Arizona and Nevada section of the Catholic Hospital Association will hold their annual conventions simultaneously. Other groups, including the hospital social workers, record librarians, dietitians, physical therapists, and occupational therapists, will hold section meetings and participate in the general assemblies. Representatives and observers from the American Hospital Association, the American College of Surgeons, the California Medical Association, and the Public Health League of California will be represented on the program and will be invited to participate in the deliberations.

The conference theme is "The New Era in Hospital Service," and the program has been designed to allow for open discussion of vital subjects affecting the care of the sick and injured.

Among the speakers who will be here from the East are: Nathaniel W. Faxon, M. D., president, American Hospital Association and superintendent of the Strong Memorial Hospital, Rochester, New York; Michael Davis, Julius Rosenwald Fund, Chicago; Paul H. Fesler, past president, American Hospital Association, Wesley Memorial Hospital, Chicago; R. C. Buerki, M. D., director, University Hospital, Madison, Wisconsin; J. A. Kingsbury, director, and F. S. Folk, Ph. D., technical adviser, Milbank Memorial Fund, New York City; and Malcolm T. MacEachern, M. D., American College of Surgeons, Chicago.

It is estimated that there will be several thousand persons in attendance.

Dr. Donald Elliot King of Ann Arbor, Michigan, has recently been appointed to the division of orthopedics, department of surgery, of the Stanford University School of Medicine, to replace Dr. Leonard W. Ely, who retires from the faculty at the end of the present academic year.

Doctor King received his A. B. degree in 1923 and his M. D. degree in 1927 from Stanford University. He has been a member of the staff of orthopedic surgery at the University of Michigan since 1928.

How the Doctors Help.—Under the above caption the following editorial was printed in the Los Angeles *Evening Herald-Express* of March 15:

"If the average citizen could have sat in with the sectional meeting of the American College of Surgeons, which has just closed a two-day conference in Los Angeles, he (or she) would have gained a profound respect for the men who are seeking, by their lives of study and practice, to help maintain the health of the nation.

"Nearly fifteen hundred surgeons attended the various sessions, and many nationally known scientists addressed them on numerous subjects, all relating to the task of keeping the American people fit.

"Dr. George Crile of Cleveland, Ohio, internationally famed in his profession, revealed that 'among the great achievements of the century has been the discovery of the cause of typhoid fever, of infantile paralysis, of puerperal fever, of yellow fever, and of tuberculosis.' In addition, 'surgery and orthopedics have conquered most of the deformities of children.'

"The meeting in the Shrine Auditorium last night afforded an opportunity to a goodly number of men and women to learn something about medical and surgical science, but naturally that audience was small when compared with the city's population.

"The physician, whether family doctor or noted specialist, deserves the respect and gratitude of every living human being. He never falters in his task, and we who benefit by his labors should be prompt to grant him not only just remuneration for specific work, but love and gratitude for his lifelong devotion to the healing profession."

Clippings from the Daily Press:

Pigs to Be Used in Death Tests.—Pigs, and not dogs, will be the subjects in future experiments of Dr. Robert Cornish to restore life after death.

Doctor Cornish, University of California anatomist, who has succeeded in restoring respiration and circulation for a few hours to two dogs pronounced dead, explained today that dogs have too many friends.

"Hogs more nearly resemble humans in their digestive and circulatory systems and have fewer friends than dogs," he said.

"We will use pigs—they seem friendless.

"The public does not understand that our method of killing dogs for experimentation is no different from that practiced every day in the city pound. We do not believe there will be any protest against experimenting on hogs."

"Court Orders Sterilization.—Sterilization of seventy persons suffering from hereditary diseases was ordered by the new district eugenics court in Hamburg, Germany, on March 13.

"The report said the majority of persons to undergo the operations are doing so at their own request."

"Chicago Amebiasis.—A suit for \$600,000 damages, an outgrowth of the epidemic of amebic dysentery during the World's Fair last summer, has been filed against Dr. Herman Bundesen, City Health Commissioner, and the Congress Hotel, according to an Associated Press dispatch.

"Although the outbreak reportedly was under investigation early in the summer, it did not become public knowledge until November 9, the last week of the exposition."

CORRESPONDENCE

Subject of following letter: Names and addresses of "identical twins" requested.

Berkeley, California,
February 10, 1934.

To the Editor:—Human heredity is in many ways of great importance for human welfare, and one way in which it may be most advantageously studied is through the investigation of twins.

There are, as you know, two distinct classes of twins. In one type, called fraternal twins, each individual has developed from a different egg, and such twins do not resemble each other more closely than brothers and sisters usually do. They may or may not be of the same sex. In the other type, known as identical twins, both individuals develop from a single egg. They are, therefore, always of the same sex, strikingly alike in appearance, eye color, hair color, body configurations, and many other traits.

Any pair of identical twins has a common organic inheritance, and this condition is attested by their close resemblance. Their differences must be due to environment. Hence they afford an unusual opportunity for distinguishing those traits handed on through the germ from those produced by the surroundings.

We are especially desirous of obtaining data on tuberculosis and cancer because of the importance of knowledge of the possible rôle of heredity in these diseases. We should like also to obtain any data on insanity or other nervous disorders or defects in identical twins, or in fact any peculiar pathological conditions which may occur in twins of this type.

If in your practice you may have come in touch with pairs of adult like-sexed twins whom you think may be identical, and can give us their names and addresses, it will be of great assistance. Other points of interest and suggestions for widening the scope of this study will be appreciated. Its success demands a mass of evidence and careful detail.

Any information which we receive either from you or the twins in question, will be used only in the presentation of mass statistics. Names are for my own use only, in order that I may get in touch with said twins.

Thanking you for your part in this work, I am

Sincerely yours,
S. J. HOLMES.

University of California,
Department of Zoölogy,
4013 Life Sciences Building.

CALIFORNIA HEALTH INSURANCE RACKETS

Reference to the Alameda County exposé of certain health insurance rackets was made in the *MARCH CALIFORNIA AND WESTERN MEDICINE*, pages 196 and 216. Also in this issue, page 262.

What has been accomplished in Alameda County may be duplicated in other cities where similar or worse conditions exist. The following excerpts, taken from newspaper stories which have been printed in the last two months make interesting and instructive reading, and indicate along what lines steps to remedy some of these evils may be taken.

Excerpts follow:

From the *San Francisco Call-Bulletin*, February 4, 1934:

DEMAND STATE OUST HEALTH RACKETS

Demanding a statewide clean-up of "health insurance" rackets, Joseph Laney, foreman of the Alameda County grand jury, today appealed to Governor Rolph for state aid in conducting an investigation.

With nineteen men already under indictment, Laney charged that E. Forrest Mitchell, California insurance commissioner, has "dodged all attempts to have him clean up this situation."

Earl Warren, district attorney of Alameda County, heaped more fire on the commissioner, declaring that

Mitchell "defied deputy sheriffs who sought to serve him with a subpoena by telephone yesterday."

Mitchell could not be located for a statement.

In the appeal to Governor Rolph, Laney said that local investigation has shown the insurance racket is in operation throughout the state.

Mitchell, he declared positively, will be subpoenaed and "brought willy-nilly," before the grand jury at next Tuesday's session.

Indictments against the nineteen men charged with operating the giant insurance swindle were being considered by Superior Judge Fred V. Wood today.

Two indictments were returned against each person—the first of conspiracy to commit petty theft and conspiracy to violate the insurance laws, and the second of conspiracy to make false promises.

Harry Kramer, asserted leader of the group, and two reported confederates, E. L. Knotts and Harry Blank, are held in the Alameda County jail.

Kramer's bail was set at \$20,000 and that of Knotts and Blank at \$5,000 each.

The three charges are felonies, each punishable by two years' imprisonment, a \$5,000 fine or both.

The remaining sixteen indictments were placed in the secret file pending arrest of the persons indicted. Officers sought the others today, while Joseph Lang, jury foreman, announced that the grand jury will meet again on Tuesday to continue investigations.

The indictments were asked by District Attorney Warren against companies which have "worked" Alameda County. Warren turned over more than thirty complaints to the grand jury.

Warren has been advised by Dr. C. B. Pinkham, secretary-treasurer of the State Board of Medical Examiners, that 125 of these organizations are working out of San Francisco.

Complainants include physicians and hospitals who have rendered service to holders of policies on the strength of their insurance, to find it is impossible to collect fees.

Bookkeeping records in possession of the Alameda jury showed that one company had but \$140 in cash to meet the claims of 2,000 "policy" holders.

Testimony by a number of the alleged racket's victims revealed that more than \$12,800 was collected in the bay region alone last November, one woman testifying that the "agents" would take anything in payment, receiving from her \$1 down and a dozen eggs.

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From the San Francisco *Examiner*, February 24, 1934:

WARREN ASKS HEALTH RACKET PROBE BY UNITED STATES
Misuse of Mails Is Charged; Medical Profession Tells Plan for Non-Profit Associations

Having obtained indictments against nineteen persons for alleged participation in the "health insurance racket" in Alameda County, District Attorney Earl Warren asked the Federal Government yesterday to proceed against "racketeers" in other sections of the state.

As he prepared evidence of improper use of the mails for Government investigation, the organized medical profession revealed plans for replacing fake health and accident associations with county-wide "mutuals" operated directly by physicians and recognized hospitals on a non-profit basis.

The Alameda County Medical Association, it was learned, has sponsored the Mutual Hospital Association, which is ready to inaugurate the new plan as soon as state laws are sufficiently clarified. The plan was explained by Dr. W. E. Mitchell, president of the newly formed association, in the following statement:

"The approved hospitals of the East Bay, in cooperation with the County Medical Association, are studying a plan to render hospital service on a periodic payment plan. This includes a free choice of physicians and will not interfere with the personal relationship between patient and physician."

The medical profession realizes that a demand exists for a plan, conducted on a non-profit basis, by which the person of moderate means can be assured of hospital service when needed. In the United States today there is no such plan in operation in which medical society and accredited hospitals cooperate on a county-wide basis. For this reason it was necessary to conduct exhaustive investigations into all phases of similar plans.

Dr. T. Henshaw Kelly of San Francisco, chairman of the Council of the California Medical Association, disclosed that county associations of San Francisco, Santa Clara, Sacramento and other counties are studying similar plans. Because the Alameda County plan has been most fully developed, other county associations are awaiting outcome of the trial in that county, he said. . . .

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From the San Francisco *Chronicle*, February 28, 1934:

HEALTH RACKET CHIEF ADMITS GUILT IN COURT

Kramer to Be Sentenced to San Quentin on Saturday

From his own lips thousands of Californians now know the man they trusted to take care of them in time of illness and accident was a swindler—that he stole their meager premiums without any intention of giving them service.

Harry Kramer, head of five alleged racketeering health insurance associations, pleaded guilty yesterday before Superior Judge Wood in Oakland on one count of an indictment charging conspiracy to commit theft.

Saturday he will be sentenced to serve from one to two years in San Quentin. At that time District Attorney Earl Warren will ask other counts, charging false promises and violation of the insurance laws, be dismissed.

The campaign against racketeering insurance companies was revealed exclusively in *The Chronicle* last week.

E. L. Knotts, one of Kramer's salesmen, probably will plead guilty today on the same stipulation, his attorney, Frank Creely, said. Harry Blankenstein, another salesman, pleaded not guilty yesterday and will go to trial March 20. Sixteen other alleged agents of Kramer, all under indictment, still are fugitives.

All concerned are alleged by District Attorney Warren to have been under Kramer's direction in the United Travelers' Underwriters, the Western Pacific Health Association, the California Farm Health Bureau, the Metropolitan Health Bureau and the California National Health Association.

State Insurance Commissioner E. Forrest Mitchell was questioned at length yesterday by the Alameda County grand jury as to how much he knew about the operations of racketeer health insurance organizations and how long he had known it.

Declaring he was amazed at the gravity and extent of the situation as presented before the grand jury, he promised a statewide clean-up of "health racket" companies and expressed the opinion his San Francisco deputies had shown "a lack of diligence in protecting the public."

Two of those deputies, Siegfried Gundelfinger and Samuel Beckett, admitted their office had been flooded by complaints against the Kramer company, but no decisive action had been taken.

It was brought out that in November, 1932, Frank Guarena, attorney for the insurance commissioner, submitted an opinion that Kramer and his associates were operating illegally.

A copy of this opinion was forwarded to Kramer with instructions to stop business. The instructions were ignored and no further action taken. . . .

Postal inspectors here said they would drop investigation as to Kramer's possible misuse of the mails in as much as he must serve a state prison term.

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From the San Francisco *Call-Bulletin*, March 3, 1934:

INSURANCE MAN GETS TWO YEARS IN SAN QUENTIN

Two years in San Quentin and a fine of \$5,000 was the sentence given today to Harry Kramer, San Francisco insurance man, who pleaded guilty of conducting an "insurance racket" which bilked aged persons out of several hundred thousand dollars.

Kramer was sentenced by Superior Judge Fred V. Wood in Oakland.

Defense attorneys vainly tried to have the "brains of the insurance racket" given a county jail sentence in exchange for his guilty plea.

Investigation by District Attorney Earl Warren of Alameda County resulted in the arrest of Kramer and two of his "insurance salesmen," E. L. Knotts and Harry Blankenstein.

Sixteen others are being sought by Alameda and San Francisco police. All were indicted by the grand jury.

Knotts, who pleaded guilty at the same time as did Kramer, is also awaiting sentence. Blankenstein pleaded not guilty and is to go on trial March 20.

Police claim that Kramer and his salesmen operated from San Francisco and mulcted persons who were beyond the age limit for ordinary life insurance coverage.

Warren charged he failed to get the cooperation of the state insurance commissioner, E. Forrest Mitchell, during his investigation and that Mitchell ignored Warren's summons to come before the Alameda County grand jury.

Mitchell denied the charge and later appeared before the jury and testified against Kramer and his salesmen.

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From the San Francisco *Examiner*, March 3, 1934:

SECRET HEALTH RACKET PROBE REVEALED HERE

Jury Inquiry Promised Into Charges \$350,000 Lost Each Month by 100,000 Persons

A secret investigation into certain San Francisco health and hospital associations, said to have more than 100,000 subscribers who are being defrauded of \$350,000 a month, was revealed yesterday by Assistant District Attorney Leslie C. Gillen, head of the fraud bureau.

Gillen said citations would be issued soon against operators of certain allegedly fraudulent associations as a preliminary to possible grand jury action. Gillen said that from evidence in his hands he believes that few of the associations here are doing business on a legitimate basis.

"These subscribers," he continued, "are making payments to these associations of \$1 to \$7 a month. We estimate that these subscribers are being defrauded of some \$350,000 a month."

"Certain of the health insurance and hospital associations here have been under a series of investigations by the district attorney's office and the State Board of Medical Examiners."

Gillen said, further, that the complaints of several persons who have been making regular payments into some companies which they thought were providing health insurance and hospital service were heard at the Fraud Bureau yesterday. Complaints centering on two of these concerns, he added, have been selected to open the fight to "wipe them out."

As brought out in the charges here and in the East Bay indictments, certain of the associations are alleged to operate by selling health insurance and hospital service to the public without having the facilities to provide such benefits.

According to one story told to Gillen, a woman subscriber said the company to which she paid several dollars a month for more than three years failed to give her medical attention, as promised, when she became ill.

Dr. Charles B. Pinkham, secretary-treasurer of the State Board of Medical Examiners, described the situation in this way:

"For years certain groups of promoters have been operating companies in San Francisco under various names, bilking the public without any supervision from local or state agencies."

"Because these racketeers have been able to avoid the supervision of the law, we have been unable to curb their activities. Finally, through the many complaints brought to my attention by disgruntled subscribers, I believe we have a weapon to fight them with."

"Contracts issued by certain of the companies and sold by high-pressure salesmen are so full of technicalities and loopholes that 80 per cent of the promises in the contract are repudiated."

"In many cases it is impossible for the subscriber to fix legal liability because of the constantly changing professional staffs of certain associations. Many doctors who have discovered the 'modus operandi' of this racket have refused to be associated with it."

Gillen, who said the complaints now being studied range from misrepresentation by salesmen to malpractice by the so-called doctors of the associations under fire, declared:

"It is unbelievable that any person, who desires to do so, can open a 'hospital association,' under existing conditions, sell thousands of contracts and then close up, leaving subscribers without legal protection."

He cited some instances in which some of the associations apparently were absorbed by others, with the result that a subscriber continued to pay dues in ignorance of the "merger" and the fact that the absorbing concern had not assumed the provisions of the contracts issued by the original company.

"Some of these companies are owned and operated by laymen," Doctor Pinkham added. "In many cases a non-medical person makes the physical examination of contractees and often prescribes medicine in cases of illness. This is in direct violation of the State Medical Act, though they frequently escape prosecution through legal technicalities."

Doctor Pinkham cited one case in which a "doctor" who was extolled in a hospital association's advertising and contract matter, was convicted by the medical examiners following discovery that he had never studied medicine.

He charged further that many of the persons connected with some of the associations have been found to have criminal records, and that contracts have assertedly been sold on the representation that they were with legitimate, well known companies.

From the San Francisco Chronicle, March 6, 1934:

GEIGER SEEKS INFORMATION FOR TEST SUIT

Mitchell Calls for Action Against Associations' Activities in Four New Counties

Executing a sudden flank attack, Health Director J. C. Geiger yesterday issued an order designed to prevent health racketeers from abandoning their ill and disillusioned victims for the county to care for at the expense of taxpayers.

It also contemplates recovery from health associations all money spent by the city in the hospitalization of their contract holders."

"I have instructed the social service unit to ask each patient that comes into the San Francisco Hospital whether he has a policy in such an organization," said Doctor Geiger. "If he has one, the social service workers are to inquire into all of the particulars and report to me with a view toward my suing, in the name of the city, for full reimbursement for public funds expended."

Meantime the health director will search the files of the State Board of Medical Examiners and other sources for a strong instance of which he may make a test case in court, he said.

Meanwhile, State Insurance Commissioner E. Forrest Mitchell yesterday called upon district attorneys of San Mateo, Sonoma, Los Angeles, and San Bernardino Coun-

ties for action in connection with new complaints against alleged racketeering health associations.

To each, Commissioner Mitchell legally certified a number of complaints arising in his particular county and offered to furnish, for purposes of investigation and prosecution, all evidence in his possession.

Mitchell announced that he is also preparing to certify several San Francisco complaints to District Attorney Matthew Brady.

Through Assistant District Attorney Leslie C. Gillen, in charge of fraud matters, Brady already has issued citations for executives of two local health organizations and for two doctors. They will appear before Gillen tomorrow afternoon to answer complaints of persons who allege misrepresentation or failure to render service."

There are a number of companies still operating in San Francisco without a certificate of authority from the State Insurance Commission. Commissioner Mitchell will demand that these be prosecuted.

Prior to Attorney General Webb's recent ruling, placing all such companies under jurisdiction of the Insurance Commission, anyone who could get a little credit at the printers could go into the health association business, Gillen said.

Special Agent J. W. Davidson of the State Board of Medical Examiners said promoters had promised unbelievable benefits to contract holders, repudiated them in the fine type of the policies, collected all the money they could and either went out of business or changed the company name when victims' complaints became too numerous.

The State Board of Dental Examiners meantime is continuing its campaign for revocation of licenses of dentists allied with questionable health associations.

District Attorney Warren of Alameda County today will bring James Christian, fourth man arrested under the nineteen indictments passed by the Alameda County grand jury in the "health insurance racket probe," into Superior Court for arraignment.

Simultaneously Harry Blankenstein, one of the three other men arrested, will have his arraignment before Superior Judge Frank Ogden."

Christian told Assistant District Attorney Richard Chamberlain that he had nothing to conceal, and that he worked for a legitimate insurance company from December, 1932, to November, 1933.

1 1 1

From the San Francisco Examiner, March 9, 1934:

TEST CASES ORDERED IN RACKET QUIZ

Gillen to Interview Alameda "Master Mind" in Prison; Salesman Draws Eighty Days

Under orders from District Attorney Matthew Brady, Leslie C. Gillen, assistant district attorney, yesterday was preparing to take court action against several San Francisco "health service" associations in the fight against the health insurance racket in San Francisco.

To test the status of these organizations, Gillen said, he will charge them with violating Section 435 of the Penal Code. This section makes it a misdemeanor for any business, requiring a license, to operate without such license.

"That is the only procedure possible under the code," Gillen explained. "It rests with some other agency to take possible civil action, such as an injunction suit to restrain these concerns from doing business."

Gillen announced he has also been ordered by Brady to make a trip to San Quentin prison and interview Frank Kramer, convicted "master mind" of the Alameda County racket. While being transferred to prison after pleading guilty, Kramer asserted he could inform authorities "how to stop the fraud at once."

Meanwhile, in Alameda County, another "racketeer" pleaded guilty. He is James Christian, former salesman for Kramer's concern. On a showing Christian entered Kramer's employ in the belief his company was legitimate, and quit when he learned it was crooked, Judge Fred V. Wood reduced the charge to a misdemeanor. He imposed a fine of \$400, which Christian was unable to pay.

Christian accepted eighty days in the county jail.

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From the San Francisco Examiner, March 15, 1934:

HEALTH RACKET DRIVE MAPPED

Definite plans for prosecuting racketeers in health and hospital insurance were completed yesterday at a conference between District Attorney Matthew Brady and Leslie Gillen, assistant.

"We will ask the State Insurance Commission to swear out warrants at once for the operators of all such associations which have not obtained a license," said Gillen. "The statutes make it a misdemeanor to operate a business without a license when a license is required."

"The attorney general has ruled that these health and hospital associations are insurance companies, and must have a license from the Insurance Commission to operate."

Approximately twelve such misdemeanor warrants will be asked, Gillen said. It is planned to charge two of the more flagrant operators with conspiracy, he added.

TWENTY-FIVE YEARS AGO*

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. VII, No. 12, April 1909

Annual meeting:

Hotel Vendome, San Jose, April 20, 21, and 22, 1909.

Adjourned, Thank God.—Let us give voice to those feelings of relief and gratification which surge through the manly bosom by saying, with heartfelt emphasis, *Thank God! The legislature has adjourned!!* For some possibly unaccountable reason, the attacks upon the medical and dental laws were unusually fierce and numerous this session. Bills of all sorts, introduced by all sorts of impossible people, intended to do all sorts of things to the medical law, were introduced; and at least one bad bill came pretty near to passing. In fact, Assembly Bill No. 1331, fathered by Mr. Silver of Pleasanton, who seems to think he knows more about medical legislation than any other semi-living human being on earth or in the heavens above it, passed the Senate by a vote of 21 to 15 on the night of March 20. . . .

Genius Debauched. . . . —What a man has done—his record—means nothing in a partisan fight like this attack on Dr. George H. Simmons, editor of *The Journal of the American Medical Association*. It means nothing to these throwers of manufactured mud that *The Journal of the American Medical Association* has come to be, in the last ten years, and under Doctor Simmons' management, the foremost medical publication in the world. It means nothing to these gentlemen (Heaven save the word!) that the Association has grown and thrived beyond the fondest dreams of those who helped its reorganization less than a decade ago. But it does mean much to this coterie that, with growth and prosperity has come an ability to attack fraud and dishonesty and trickery, and to put out of business many a fake nostrum and many a fraudulent proprietary whose only worth was in the value of its advertising. And it is with the ranks of the fakes and the frauds that — joins in attacking the Association, through its secretary and editor. The downfall of a possibly great man is a pitiable thing; there is no antagonism against Doctor Simmons raised by such obvious attacks; only pity for Dr. —. . . .

We Still Progress. — Under date of February, 1909, Leland Stanford Junior University puts out a preliminary announcement of its department of medicine, founded as Cooper Medical College. The taking over of Cooper Medical College by Stanford University is a notable event for our state and for medical education in general. . . .

From an article on "Treatment of Burns" by Chester J. Teass, M. D., Kennett.

My excuse, if any is necessary, for bringing to your attention the treatment of so common a condition as that of burns is due to the very fact of their importance through their frequency. . . .

From an article on "Medical Milk Commissions and the Importance of a Pure Milk Supply" by William L. Holt, M. D., Santa Barbara.

I think we physicians hardly appreciate the importance of the milk supply as a factor in health and dis-

* This column strives to mirror the work and aims of colleagues who bore the brunt of society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

(Continued in front Advertising Section, page 15)

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA*

By CHARLES B. PINKHAM, M. D.
Secretary-Treasurer

News Items

At a meeting of the Board of Medical Examiners held in Los Angeles February 26 to March 1, the following changes in status of licentiates were made:

Bruguiere, Pedar S., M. D. Restored February 26, 1934. Probation for two years.
Barber, Schuyler A., M. D. Restored February 26, 1934. Probation for five years, without narcotic privileges.
Citron, I. Jesse, M. D. Restored February 26, 1934. Probation for five years, without narcotic privileges.
del Castillo, Antonio Lopez, M. D. Revoked March 1, 1934.
Enos, Joseph B., M. D. Three years' probation, February 27, 1934.
Freeman, Ernest, M. D. Restored February 26, 1934. Probation for five years.
Hopkins, Cary N., M. D. Two years' probation, March 1, 1934.
Looser, Reinhardt, M. D. Three years' probation, February 28, 1934.
Northrup, Frank Andruss, M. D. Revoked February 27, 1934.
Piburn, John L., M. D. Revoked March 1, 1934.
Rosslyn, Isadore M., M. D. Probation, March 1, 1934, five years, without narcotic privileges.
Sandholdt, John P., M. D. February 28, 1934, five years' probation, without narcotic privileges.
Simmons, Joy V., D. C. (drugless practitioner). Revoked March 1, 1934.

"With District Attorney Earl Warren of Alameda County pointing the way, it is now up to the other district attorneys of California to 'crack down' on fraudulent health insurance racketeers if the state is to be cleansed of this menace. This assertion came today from Dr. George G. Reinle of Oakland, president of the California Medical Association. 'We know that this nefarious racket can be stopped,' Doctor Reinle said. 'Our district attorney obtained nineteen grand jury indictments. One confessed racketeer is serving a prison term, and two are serving jail terms. In other counties of California nothing has been done, and yet we have reason to believe that the health insurance racket is even more prevalent elsewhere than here. . . . There is no good reason why these racketeers should be permitted to prey upon the people any more. . . .'" (Oakland *Post-Inquirer*, March 12, 1934.)

Under date of February 19 the Board of Chiropractic Examiners reported that at a meeting held in Sacramento February 10, 1934, the chiropractic licenses of the following individuals were revoked: George Dunbar Brison, D. C., Joy V. Simmons, D. C., and R. Harry Snyder, D. C.

Reports relate that Jean de Desley on February 6, 1934, pleaded guilty to a violation of the Medical Practice Act in the Justice Court of San Gabriel Township and was sentenced to serve sixty days in the county jail, suspended for six months. (Previous entries, September, 1926; January, 1927; June and July, 1933.)

"E. E. Rood, who, as astrologer of the air, broadcast for a time from a Tia Juana station, yesterday won probation on a charge of violation of the State Corporation Securities Act. Probation was conditioned on his immediate delivering \$1,000 to pay the state \$250, cost of extraditing him from Texas; \$600 in labor claims and \$150 partial refund of money obtained from a local man for stock in a recording corporation in which Rood is alleged to have sold stock without a permit from the state. In addition, Rood must make

* The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.

(Continued in front Advertising Section, page 17)

MATERNAL MORTALITY DUE TO CALCIUM AND PHOSPHORUS DEFICIENCY

*Protect the Mothers through
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You Protect the Babies too!*

PUBLIC Health statistics show that "this great nation of ours has the highest maternal mortality of any civilized nation in the world. More mothers die in childbirth per one thousand births in our great United States than in any other civilized nation. Something like fourteen thousand women lose their lives each year from this cause in the United

States. Authorities have said that probably fifty per cent of these deaths are preventable. I should go further and say that if we could eliminate rickets practically one hundred per cent of those deaths could be prevented. The deformities of the bones that occur in early infancy are responsible for the deformed pelvis of the mothers who die in childbirth."

(Wynne, S. W., Commissioner of Health, New York City, *Certified Milk*, Oct.-Nov., 1933).

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MARK GERSTLE, JR., M. D., Consultant in Neurology
ERNEST D. CHIPMAN, M. D., Consultant in Dermatology
JAY JACOBS, M. D., Consultant in Dermatology
CABOT BROWN, M. D., Consultant in Lung Diseases

Urology

A. H. McNULTY, M. D.
ALVIN E. CERF, M. D.
SAMUEL A. GOLDMAN, M. D.
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(Continued from front advertising section, Page 31)

In our conception of the monetary cost of accidents to society, we must make room for what we may call, for purposes of definition, "the human cost." It is rather startling when we comprehend the fact that accidents take the lives of more children of school age than any two diseases, except in the late "teens" when tuberculosis is only slightly more deadly. This in spite of the fact that the accidental death rate for children between the ages of 5 to 14, inclusive, declined 11 per cent in the period from 1922 to 1930, while the accident death rate for persons of all ages in the same period increased 16 per cent.

The effects of industrial accidents by no means confine themselves to the operating costs of the profit and loss statements of the plant in which the accident occurred. It is also true, however, that the individual industrial establishment is not immune from accidents to its employees that do not occur in the workshop. Indeed, it is affected oftentimes in a very direct way by accidents to persons not in its employ at all. We must remember that a workman injured in his home is just as thoroughly and completely injured as though he had been hurt at the place of employment. While the employer is not required to pay compensation under such circumstances, nevertheless he sustains real losses.

It is our belief that a nation-wide program on accident prevention, involving the three factors of education, engineering, and enforcement of laws, will help to reduce these costs.—Extract from paper read by W. H. Cameron, managing director, National Safety Council, Chicago, at the All-California Accident Prevention Conference, San Francisco, May 25, 1933.

Dog Days Are All the Year.—"Every dog has his day," according to an ancient adage, and it applies as well to the liability of the dog to "go mad"—become infected with rabies—as to all those other factors of

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canine life which may be regarded as dogly privileges; for in this sense of the word, every day is dog day, all the year round. The "dog days" of midsummer are purely fictional, the slowly receding remnant of an old superstition; because there is no season of the year in which the dog is more liable to rabies infection than at any other season—or all others.

Sirius—the "dog star"—rises with the sun for about six weeks, beginning with the third or fourth week in July, a period known from ancient times as "dog days." As Sirius, the brightest star in *Canis majoris*, was regarded as exercising a baleful influence, it seemed logical for some worthy ancient to link up the star, the "big dog," the dog himself and the fact that he sometimes "goes mad," and apply the result to the season; hence, the "dog days."

The word "hydrophobia" also is an outgrowth of the old superstition. In its roots, it consists of the Greek *hydor*, or *hudros*, water, and *phobomia*, fear of. The mad dog has no fear of water, or hatred of it; but at an early stage of infection his throat muscles become paralyzed, so that he cannot drink, although he craves the liquid. This fact was translated into a "fear of water" and linked up with the generally malevolent influence of the really fictional season.

More dogs are running about in summer than at any other season, consequently there may be, and are likely to be, more dog bites than in other seasons. To that extent, rabies is more of a menace. Taking cognizance of this fact, the Director of Health, Dr. H. G. Southard, points out that rabies is an acute, specific and rapidly fatal infection communicated from a rabid animal, usually by biting. "Infection, however," he adds, "can occur if the saliva of the rabid animal comes in contact with any slight wound of the skin surface. Man always contracts the disease from a lower animal, commonly the dog; yet any animal, domestic or wild, may become infected and transmit the disease, for which there is no known cure. Prevention is the only safeguard.

Continuing, the director pointed out that rabies is widespread in the United States, and has increased in recent years; yet it may be controlled and even exterminated by intelligent measures, in which connection he said:

"Consistent muzzling of all dogs for two years would virtually eliminate rabies. There is difficulty in getting consent for this requirement on account of sympathy for the dog. It should be recalled that the measure proposed is good for the dogs themselves." In this connection Rosenau is cited as saying, "Two years after a muzzling law was enforced in England, rabies disappeared, and it has not been known in Denmark, Norway, and Sweden, where such laws are enforced, for more than fifty years."

Rabies is an extremely dangerous disease, and treatment should be started as soon as possible following a bite by a rabid animal. If the disease develops there is little hope. A suspected animal should be kept under observation for at least ten days. If killed at once, there is always doubt as to the possibility of infection. Should the animal die, the head should be packed in ice, expressed to the laboratory and the laboratory notified at once by telegraph or telephone.

If bitten, the victim should consult a doctor at once, and physicians, health commissioners, and veterinarians may be relied on to give immediate attention to any case. There should be no delay; even a short delay may cost a life.—*Ohio Health News*.

Two Methods to Finance Public Works Under NRA.—When municipalities undertake to launch improvements so as to participate in the public works program of the Federal Government it is necessary that an immediate decision be made as to the method to be followed in financing the local subdivision's share of the cost. Many inquiries have been received by the State Health Department relative to financing

(Continued on Next Page)



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Assets.....\$159,104,590.29
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The following accounts stand on our Books at \$1.00 each, viz.:

Bank Premises and Equipment - (Present Value \$2,073,413.00)
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MISSION BRANCH.....Mission and 21st Streets
PARK-PRESIDIO BRANCH.....Clement St. and 7th Ave.
HAIGHT STREET BRANCH.....Haight and Belvedere Streets
WEST PORTAL BRANCH.....West Portal Ave. and Ulloa St.

(Continued from Preceding Page)

sanitary improvement projects. Accordingly, the different methods possible under Ohio laws are herein set forth. It should be stated also that all types of bonds permissible in Ohio will be acceptable to the Federal Emergency Administration of Public Works as collateral for loans.

There are two distinct classes of bonds permissible under Ohio laws. These are (1) general obligation bonds and (2) mortgage bonds. In the first instance the full faith and credit of the municipality is pledged to the repayment of the loan. Contrasted to this type of bond is the second type, or mortgage bonds, which are

secured *only* by the revenues from the utility which is so financed.

Mortgage Bonds.—Under the terms of the Ohio Constitution, Section 4, Article XVIII, "Any municipality may acquire, construct, own, lease, and operate within or without its corporate limits any public utility the product or service of which is or is to be supplied to the municipality or its inhabitants. . . ." This section of the Constitution is operative for both waterworks and sewerage and sewage disposal; waterworks by virtue of Section 3955 to 3981, inclusive, of the General Code, and sewerage by the terms of Section 2891-1 to 3895-5, inclusive. The latter is known as the "Sewer Rental Law," and authorizes charges for sewer connections. Under the terms of Section 5, Article XVIII, of the Constitution, it is necessary for a council to declare its intention to construct and operate a waterworks or sewerage system as a public utility.

The issuance of mortgage bonds is authorized by Section 12, Article XVIII, of the Constitution, which provides that, "Any municipality which acquires, constructs or extends any public utility and desires to raise money for such purposes may issue mortgage bonds therefor beyond the general limit of bonded indebtedness prescribed by law; provided that such mortgage bonds issued beyond the general limit of bonded indebtedness prescribed by law shall not impose any liability upon such municipality, but shall be secured only upon the property and revenues of such public utility. . . ." Action under these provisions of the Constitution is by council only, no vote of the



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Hydro-Electro and Physiotherapy Treatments. Specializing in Recuperative and Nervous Cases. Homelike Atmosphere. Absolutely Modern in every respect. Inspection invited.

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electorate being required. Most municipalities are inclined to favor this method of financing, as it entails no additional taxes.

General Obligation Bonds.—Distinction must be made between two types of general obligation bonds. Special assessment bonds are paid from funds derived from assessments levied against benefited property. Bonds of this type are issued by the taxing authority of the subdivision and no vote of the electorate is required. The amount of such bond issue, in the case of municipalities, is limited to 33½ per cent of the value of the property assessed, after the improvement is completed.

Bonds issued under authority of Section 2293-1 to 2293-37, inclusive (Uniform Bond Act) are repaid by general tax levies. Municipal officials are familiar with the provisions of these sections of the statutes, such as (1) bonds must mature serially in substantially equal annual or semiannual installments; (2) limits prescribed for bonds issued (a) by vote of council and (b) by vote of people; (3) maximum maturities of bonds stipulated for various types of improvements; (4) levy necessary to meet sinking-fund requirements of bonds must be integral part of bond legislation; (5) cost of construction on bonds and notes; (6) per cent of vote required for approval when submitted to the electorate; and others.

"In order to remove some of the restrictions of the Uniform Bond Act so that Ohio political subdivisions could speedily participate in the federal public works program of the NRA, the Ohio legislature enacted the Waldvogel-Smith Act (Senate Bill No. 403) passed July 1, 1933, and effective July 20, 1933. This Act provides that bonds issued for public works under the National Industrial Recovery Act, 'and for that purpose only,' 'shall not be subject to the limitations of Section 2293-14, 2293-15, 2293-16, and 2293-17 of the

(Continued on Next Page)



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But times have changed, as well as cattle. Now, the therapeutic value of certain gland products is definitely established and each year adds to our knowledge in this important field of therapeutics.

To the physician prescribing gland products we urge specification of "Wilson," because it connotes a product made at the source of supply from fresh glands, processed promptly, with the aim of conserving maximum hormone activity, in a laboratory devoted exclusively to the endocrine field.



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(Continued from Preceding Page)

General Code.' The Act stipulates, 'however, that the aggregate amount of such bonds issued under this act in excess of such limitations shall not exceed the amount by which the net indebtedness of the municipality or subdivision within such debt limitations, as it exists on the effective date of this act, will have been reduced by the thirty-first day of December, 1938.' The Act also provides that 'only the affirmative vote of a majority of those voting' shall be necessary in case the question of issuing bonds is submitted to the electors. It is stipulated, however, that 'before such bonds are submitted to a vote of the people, the conditional approval by the proper federal authorities shall first be obtained for the project.' The Act further provides that 'if such bonds are purchased by the United States or any instrumentality thereof it shall not be necessary to advertise or offer the same for sale at competitive bidding.'

"It should be pointed out that although the limitation of 1 per cent for bonds issued without a vote of the electors (Section 2293-14) is removed, the amount of levy which would be required to meet sinking fund requirements is still limited to 15 mills, unless an affirmative vote of the electors is secured by the provisions of Section 2, Article XII, of the Ohio Constitution. In many instances this levy limitation will make necessary a vote unless the improvement will produce a revenue.

"Officials of many municipalities are concerned over meeting interest and sinking fund charges for the first three or four years, either by reason of poor tax collections now obtaining or, in the case of utilities such as waterworks or sewerage, the slow building up of the utility as a revenue producer. The Federal Government has pointed out that in such cases the grant offered, which is 30 per cent of the cost of labor and material, could very properly be used for the fixed charges on the financial set-up and thereby postpone

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Pathologist

A. H. WARNER, Ph.D.,
Physicist

payments on bonds maturing or interest, or both for a period of perhaps four years. In the case of utilities this scheme would work to especial advantage."—*Ohio Health News*.

Clam Dealers Are Certified.—The State Board of Public Health, at its regular meeting on January 2, 1934, granted certificates to certain clam diggers and clam dealers which supply markets in San Francisco and the bay region. These certificates were issued to four San Francisco firms, one in Sausalito, and one in San Rafael. The holding of a certificate indicates that clams will be obtained only from unpolluted sources that are not under state quarantine and, therefore, are quite free of any health menace. Should a certified clam dealer take clams from polluted sources, his certificate will be confiscated.

This method of regulation is made necessary because of the fact that a large part of San Francisco Bay is polluted by sewage and many clam diggers wander about from place to place, gathering clams that may be highly dangerous for human consumption.

Furthermore, under the new regulations, a certificate number must be placed in plain sight upon every lot of clams in a public market. This will enable the purchaser to see and know that such clams come from certified sources. This does not apply to clams in bait stores. These need not be certified, but each pile of such clams must be labeled as fit only for bait and not for food purposes.

The unofficial list of clam diggers previously issued by the State Board of Public Health has been canceled. The public is warned not to be misled by clam diggers who exhibit their names as on this discarded list. The purchaser should demand the certificate number now issued by the State Board of Public Health. Several diggers and dealers on the discarded list cannot be certified under the new regulations.

A Quart of Milk a Day

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"The advocacy of a quart of milk daily is based primarily on the nutritional needs of the child. Since milk is the only dependable natural food source of calcium for children retention of calcium can be used as an index of the nutritional need for milk." (Retention of Calcium With a Pint and With a Quart of Milk. Dr. P. C. Jeans and Dr. Genevieve Stearns, *American Journal of Diseases of Children*; 44:645, Sept. 1932.)

The Jeans and Stearns study, pursued to throw further light on the question of the daily quantity of milk desirable in the dietary of the child, disclosed that the calcium retentions of children having a quart of milk daily were surprisingly close to the calculated need of children for various ages.

Perhaps this is no news to you. We iterate with one thought in mind: Doubtless among your patients are mothers who know nothing about the nutritional needs of children; who know neither *why* milk is necessary nor *how much* is desirable; who think if Junior gets a glass of milk daily he is getting sufficient milk. In such cases, your counsel amounts to "preventive medicine."

Some mothers may ask you *what* milk to take. You can recommend *Golden State Milk* with the utmost confidence in its unvarying high quality.



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This institution is for the treatment of medical tuberculosis and of selected cases of extrapulmonary (so-called surgical) tuberculosis.

The Colfax School for the Tuberculous consists of five Hospital Units with beds for patients who come unattended and a Housekeeping Cottage Colony for patients and their families.

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1. Patients are given individual care by experienced tuberculosis specialists. The patient is treated according to his individual needs.
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3. Patients have the advantage of modern laboratory aids to diagnosis and of all modern therapeutic agencies.
4. The climate of Colfax enables the patient to take the cure without discomfort twelve months in the year. We believe climate is secondary to medical supervision and rest, but the fact remains that it is easier to "cure" under good climatic conditions than where these climatic conditions are absent.
5. Colfax is accessible. It is on the main line of the Ogden Route of the Southern Pacific R. R. and has excellent train service. It can be reached by paved highway, being on the Victory Highway, with paved roads all the way to Colfax.

For further information address

ROBERT A. PEERS, M. D., *Medical Director*
Colfax, California

BOOK REVIEWS

List of Books Received

BOOKS RECEIVED

External Diseases of the Eye. By Donald T. Atkinson, M. D., Consulting Ophthalmologist to the Santa Rosa Infirmary and the Nix Hospital, San Antonio, Texas; Fellow of the American Academy of Ophthalmology and Otolaryngology; Life Member of the American Medical Association of Vienna. Cloth. Pp. 704, illustrated with 479 engravings. Price, \$7.50. Philadelphia: Lea & Febiger, 1934.

Our Mysterious Life Glands and How They Affect Us. A Popular Treatise on Our Glands and Their Secretions—What They Do to Us, How They Affect Our Health, Growth, Appearance, Temper, Mentality and Character, Including the Vitamins. By William J. Robinson, Ph. D., M. D., Editor, Medical Critic and Guide, Consultant to the Department of Genito-Urinary Diseases and Dermatology, Bronx Hospital. Cloth. Pp. 291. Price, \$2.50. New York: Eugenics Publishing Company, Inc., 1934.

United States Naval Medical Bulletin. Vol. XXXII, No. 2. Published Quarterly for the Information of the Medical Department of the Navy. Division of Publications, Commander Louis H. Roddis, Medical Corps, United States Navy, in Charge. Compiled and published under the authority of Naval Appropriation Act for 1934, approved March 3, 1933. Paper. Price, 25 cents. Washington: United States Government Printing Office, 1934.

Verhandlungen der Berliner Medizinischen Gesellschaft. Aus dem Geschäftsjahr, 1933. Sonderabdruck aus der Deutschen Medizinischen Wochenschrift, 1933-1934. Herausgegeben vom Vorstande der Gesellschaft. Band XLIV. Verlag, Leipzig: Georg Thieme, 1934.

The Management of Fractures, Dislocations, and Sprains. By John Albert Key, B. S., M. D., Clinical Professor of Orthopedic Surgery, Washington University School of Medicine; Associate Surgeon, Barnes, Children's, and Jewish Hospitals, St. Louis, and H. Earle Conwell, M. D., F. A. C. S., Orthopedic Surgeon for the Tennessee Coal, Iron and Railroad Company, Birmingham, Alabama; Orthopedic Chief of the Traumatic and Orthopedic Service of the Employees' Hospital, Fairfield, Alabama; Member of the Fracture Committee of the American College of Surgeons, and the Advisory Editorial Staff of the Journal of Bone and Joint Surgery. Cloth. Pp. 1164, with many illustrations. Price, \$15. St. Louis: The G. V. Mosby Company, 1934.

BOOK REVIEWS

Pathogenic Micro-Organisms. A Practical Manual for Students, Physicians, and Health Officers. By William Hallock Park and Anna Wessels Williams. Tenth edition. Pp. 867. Illustrated. Philadelphia: Lea & Febiger. 1933. Price, \$7.

The tenth edition of this widely known and much valued book has received substantial additions of material, and important revisions and rearrangement of parts of the contents have been made.

It would be desirable that some of the chapters, as, for example, that dealing with bacteriophage and that concerning amebae, might be expanded so as to include more information relative to practical detail. It is, however, conceivable that such additions would be outside the intended scope of this book.

It is gratifying that the usefulness of this valuable book has been preserved by revision.

H. A. W.

Practical Hematological Diagnosis. By O. H. Perry Pepper and David L. Farley. Pp. 562. Philadelphia and London: W. B. Saunders Company. 1933. Price, \$6.

It required a fair degree of courage and self-confidence to put forth another volume of hematological diagnosis. Pepper and Farley have succeeded, in a delightful manner, in simplifying a subject that has failed to sufficiently interest the average practicing physician, on account of its technicalities and complex arrangement. The volume is what its title implies—a "practical hematological diagnosis," yet the complete and well-arranged bibliography enables investigators in this special field to use it as a working manual. Students will find it easy and interesting reading and ample for their hematological needs and desires.

The reviewer would like to see it replace many of the poorly arranged treatises that are now collecting dust on library shelves.

E. H. F.

— NEW BOOKS —

1933 Year Book of General Therapeutics . \$2.25
Bett: Short History of Some Common Diseases 3.50
Campbell: Handbook of Therapeutics (2nd edition) 4.75
Key and Conwell: Fractures, Dislocations, Sprains 15.00
Watson-Williams: Chronic Nasal Sinusitis . 5.00

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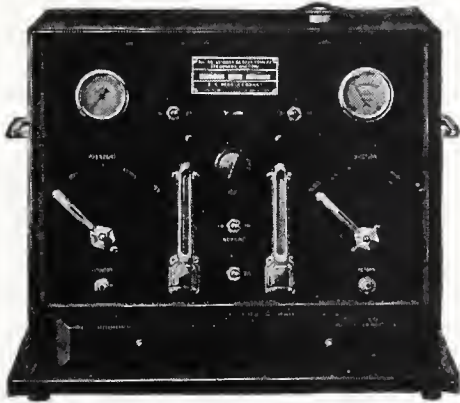
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Holden and Gurnee, Am. Jour. Obs. & Gyn., July, 1931.
Holden and Sovak, Am. Jour. Obs. & Gyn., Nov., 1932.
Counseller, Jour. A. M. A., Sept. 16, 1933.
Graham, Am. Jour. Surg., June, 1933.
Stone, Am. Jour. Physical Therapy, April, 1932.
Jacobs, St. Louis Med. Soc. Bulletin; discussion by Vaughan and Gellhorn, June 5, 1931.
Holliday, Jour. of Dental Research, Dec., 1932.
Shullman, Jour. of Med. Soc. of New Jersey, 1933.

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TWENTY-FIVE YEARS AGO

(Continue from Text Page 392)

our own interests, and to uphold the honor of our profession. The possibilities of our Association are great, its influence, which is increasing year after year, will last as a living power for good and remain a valuable legacy for the benefit of posterity. . . .

From the Report of the Secretary.

. . . In 1902 (seven years ago), with a membership in the State Society of some three hundred and with scarcely more than \$700 in the treasury, we undertook the reorganization of the society and the publication of a journal. There was no office and no office equipment. . . . It is most encouraging to see that interest in county society work is steadily increasing

(Continued on Next Page)

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TWENTY-FIVE YEARS AGO

(Continued from Preceding Page)

and that some sections which never before had shown any particular interest in organization work, are now waking up and taking a good deal of interest in it. But we are just beginning. . . .

From an article on "Report of the Committee on Public Policy and Legislation" by F. B. Carpenter, M. D., Chairman.

Among the many bills introduced in the legislature at the session just closed, those affecting medical matters were quite numerous; as for that matter they are at every session, and seem to be annually on the increase. Of them all, however, but two received serious consideration at the hands of the Sacramento solons. One of these was a bill drawn in the interest of the naturopaths, establishing a Board of Naturopaths, to be appointed by the Governor, and legalizing those already practicing naturopathy in the State. . . . It has always been the policy of your Legislative Committee—and we believe it to be the correct policy—to oppose any legislation which will place the appointment of the Board of Examiners in the hands of the Governor. Such an appointing power is undesirable, not that the Governor would not do his duty according to his best advice, but that he must depend for that advice upon consultation with a few of his personal friends or acquaintances, rather than upon the collective judgment of the assembled profession. . . .

. . . The medical man, as a member of the State Legislature, is well qualified to pass upon many questions coming before that body. . . . The medical man in either house can do more to correct the ways of the average politician than can a whole county medical society from afar. I know of no one better fitted to adorn politics than the doctor, and to him we look

to make political position an honor, and to reflect credit upon his party and his profession. . . .

From an article on "Annual Report of the Committee on Tuberculosis" by George H. Evans, M. D., Chairman.

The principal alleged objection J. N. Gillett, Governor of the State of California, brought forward in this incomprehensible message was that "While these provisions (disinfection and renovation of infected premises) are designed for the protection of the public health, they are so drastic that they would have a most deplorable effect if carried out in their entirety. The loss of business, and the inconvenience and loss through disinfection, would cause the closing of all doors against consumptives." . . .

From an article on "Report of the Committee on Cancer" by W. F. B. Wakefield, M. D., Chairman.

The Committee on Cancer beg leave to make the following recommendations:

1. That a Committee on Cancer be made a permanent committee.
2. That 100,000 brochures, for distribution to the public, be printed, setting forth, in simple manner, some plain statements of facts, intended to be educational in character, provided that the committee succeed in raising the money for the printing of the same. . . .

From an article on "Intestinal Obstruction" by Charles G. Levison, M. D., San Francisco.

Were it not for the fact that the death rate in operations performed for the relief of acute intestinal obstruction has remained unchanged during the past twenty years, I should hesitate to present so threadbare a subject for your consideration. . . .

(Continued on Page 14)

PREVENT TABES ★ PARESIS

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A blood Wassermann test, whether the reaction be negative or positive, is of limited value for determining syphilitic involvement of the central nervous system. Every patient with syphilis is a potential neurosyphilitic. To save such patients from the unfortunate later stages of the disease, such as tabes or paresis, it is essential that neurosyphilis be discovered in its early stages.

The absence of clinical symptoms in most cases, leaves a spinal fluid examination as the best available method of diagnosis. Fortunately, this method is dependable and gives essential information for a correct diagnosis.

Every patient with syphilis should have a spinal fluid examination. In the case of primary syphilis the spinal puncture should not

be made until after a few months of treatment has been given.

Cases of neurosyphilis diagnosed during the incipient stages may be brought under control by the use of Tryparsamide. With the use of Tryparsamide in the early, or meningeal type of case, clinical improvement is prompt in the majority of instances, and serological improvement usually occurs within the first year.

Tryparsamide is administered intravenously. Its use is an office procedure, does not disrupt the patient's daily routine of life, and is inexpensive. The dosage and method of treatment to be adopted with Tryparsamide depend upon the patient's age, physical condition and other factors. Complete information on the subject will be mailed upon request.

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The following Clinical Pathologists directing private laboratories in California are approved by the Council on Medical Education and Hospitals of the American Medical Association:

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TWENTY-FIVE YEARS AGO

(Continued from Page 12)

From an article on "A Clinical Lecture on Weak-Foot" by James T. Watkins, M.D., San Francisco.

To show how common have become acquired distortions of the foot, especially those associated with the several manifestations of weak-foot, it may interest you to hear that of nearly eight hundred young men lately examined by me as candidates for positions on the police force almost all showed some foot deformity and more than 30 per cent of them were rejected for defective feet alone. . . .

From an article on "A Review of the Treatment of Gonorrheal Inflammations by the Use of Sera and Vaccines" by George E. Ebright, M.D., San Francisco.

Deeming the time expedient to take an inventory of stock in this department of our therapeutic armamentarium I have reviewed the literature upon the subject in the last two years. . . .

From an article on "Major Emergency Operations with Reference to Fracture of the Skull and Wounds of the Abdomen" by Wallace I. Terry, M.D., San Francisco.

During the year September 26, 1907, to September 26, 1908, I have performed forty-five major emergency operations at the Central Emergency Hospital, and it is my privilege to make some report of the cases to this society. As the total number of cases treated at the Emergency Hospitals during that time was approximately twenty thousand, it is to be understood that the forty-five cases represented only the urgent major surgical conditions. . . .

The Relief of Doctor Carroll's Widow.

Washington, D. C., March 29, 1909. . . . —At the death of Major Carroll, September 16, 1907, his family

was left practically unprovided for. There was a small insurance policy, and a short time prior to his death Major Carroll had begun making payments toward the purchase of a home in Washington. A mortgage of \$5,000 remains unpaid on the house and a further debt of \$2,300 secured by notes payable at the rate of \$50 a month. Congress allowed Mrs. Carroll \$125 a month, and on this amount depends the support of herself, the aged mother of Major Carroll, and seven minor children. It is utterly impossible for her to make the payments on the house, and unless assistance is speedily forthcoming she will lose it.

It is certainly needless to repeat to the members of the medical profession of this country the distinguished service of Major Carroll as a member of the yellow-fever board in Havana when he submitted to an experiment to prove that the disease was transmitted by a mosquito. He suffered a severe attack of yellow fever and for a time his life was despaired of. This illness left him with a disabled heart, which eventually cost him his life. It is believed that every physician is willing to contribute toward saving the home of the widow and orphans of this hero. . . .

BOARD OF MEDICAL EXAMINERS

(Continued from Text Page 392)

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Robert Gordon Williamson, Los Angeles, University of Wisconsin Medical School.
Megumi Yamaguchi, Los Angeles, Columbia University College of Physicians and Surgeons, New York.

* * *

News Items

"The grand jury will be asked for felony indictments against two San Francisco health association heads, it was announced yesterday by the office of District Attorney Brady. . . . Meantime, in Oakland, yesterday, another alleged health racket salesman is said to have admitted that, under a fictitious name, he sold more than three hundred policies in one of the companies of the notorious Harry Kramer, now in San (Continued on Next Page)

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BOARD OF MEDICAL EXAMINERS

(Continued from Preceding Page)

Quentin. He is Aaron Gilbert, fifty-one, alias A. Gilmore, one of the nineteen indicted in Alameda County. He was arrested Saturday in Los Angeles and is being held in jail in Oakland in default of \$20,000 bonds. . . . (San Francisco *Chronicle*, April 3, 1934.) "One year in the Alameda County jail was the sentence given Aaron Gilbert, 51-year-old salesman, who pleaded guilty to violation of the State Insurance Law, through misrepresentation of insurance policies to Alameda County residents. Gilbert was the fifth man to be sentenced in the so-called insurance racket of Alameda County. . . ." (San Francisco *Call Bulletin*, April 11, 1934.)

"After six months' investigation of the activities of dentists in connection with health associations, the State Board of Dental Examiners yesterday suspended for eighteen months the license of Dr. Stefen Ney, with offices at 209 Post Street, who is said to have operated the United Health Service until recently. . . ." (San Francisco *Chronicle*, April 5, 1934.)

"The grand jury last night began its investigation of the health insurance companies. . . . Mrs. Dora Brady, a widow, who had been a member of the Liberty Hospital Association and Associated Health Service for the last sixteen years, was the only witness heard. . . . Mrs. Brady's complaint is based upon the allegation that after she had paid between \$2,500 and \$3,000 into two health insurance companies, they refused to give her hospitalization or treatment when she became desperately ill recently, and sent her, instead, to the county hospital. . . . Wheeled into the jury chamber, . . . Mrs. Brady testified she had joined the Liberty Hospital Association in July, 1918. Three years ago the Liberty organization was taken over by



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the Associated Health Service, with offices in the Phelan Building. H. N. Duhem is declared by Brady to be the head of this organization. . . . Last week she said she suffered an internal hemorrhage. Dr. A. M. Ryan responded when she called the Association. She said he told her that her contract did not cover the illness because it began twenty years ago. . . . Both Doctor Ryan and Duhem were present at the meeting of the jury last night, prepared to testify, but they were told to return for a hearing to be held later. . . . Leslie Gillen, Deputy District Attorney, in charge of the investigation, said the jury would set aside a day next week to hear testimony from the officers of the health association. . . ." (San Francisco *Examiner*, April 10, 1934.)

"Retrial of the chiropractic case, which attracted state-wide attention here a few months ago, was refused today by Judge William F. James. Defendants, including Dr. and Mrs. Roscoe B. Steele of Palo Alto and others, moved to reopen the case, which had established important rulings concerning the use of mechanical and electrical apparatus by chiropractors." (San Jose press dispatch, printed in the San Francisco *Chronicle*, April 7, 1934.)

"Apparently intended as a 'test suit' to determine the right of a Richmond chiropractor to use certain instruments in his chiropractic treatments, an action asking declaratory relief today has been filed in Superior Court here by Percy Purviance (licensed chiropractor) of Alameda against Thomas S. Bagley (licensed chiropractor). Purviance states in his action that on February 15, 1934, he entered into an agreement with Bagley at the latter's office, 3711 Garvin Avenue, Richmond, to receive treatment by electrotherapy, physiotherapy, violet ray, infra-red light, colonic irrigation, diet, and massage. He further sets forth in his action that Section 7 of the Chiropractic Act reads

that chiropractors may use certain instruments in their chiropractic work. . . . He says that he has become doubtful of whether the defendant has the right to use the modalities named in the contract and asks the court to interpret Section 7 of the Chiropractic Act. . . . Purviance is acting as his own attorney. . . ." (Martinez *Gazette*, March 31, 1934.) The records show that Percy Purviance, said to operate the Berkeley Chiropractic College, has been mentioned in "News Items" of December, 1925; January, February, June, July, September, October, 1926; July, 1927; March, April, July, September, 1928; January, 1929; June, 1932, and has been involved in much chiropractic litigation. This appears to be an action to offset the recent decision of San Jose Superior Judge James, regarding the limitations of the practice of chiropractic.

"Arraigned this afternoon before Justice Charles Kuchel, Simon Mohr, previously examined on a larceny charge, pleaded not guilty to a charge of practicing optometry in California without a license. Bail was set at \$600 and the trial was scheduled for April 17. Testimony that Mrs. Anna Manker, victim of the eye doctor, who obtained jewelry from her in payment for a \$140 asserted operation, has developed the disease called iritis, with possible serious results, within the last few days, resulted in Deputy District Attorney Harold McCabe signifying his intention of filing felony charges of assault with intent to do bodily harm against the defendant, Simon F. Mohr. . . . Mohr, it was revealed by police officers, has served a three-year term in Sing Sing prison for the same offense, an eye operation through the use of fake radium water eye drops. He was accused of stealing \$1,150 in this case. Again on December 17, 1931, Huntington Beach issued a warrant against him for the same type of operation performed upon Mrs. J. M. Monroe of Westminster. . . . Since the operation,

(Continued on Next Page)



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BOARD OF MEDICAL EXAMINERS

(Continued from Preceding Page)

which occurred on March 28 at Mrs. Manker's home, 823 North Palm, she stated that her eye had been extremely sensitive. . . . The operation, as told by her, was performed with the understanding that Mohr, who gave his name to police as John Doe Donnelly, accepted jewelry, consisting of a ring and two diamond ear drops, in place of money. She allowed him to operate, she declared, although she had been to Doctor Patterson for examination two months before, because Mohr showed her, by the use of lenses, that she was blind in her left eye. He stated that the small tube he was going to use contained radium. She was told to close her eyes, which she did, and when she opened them, according to her testimony, Mohr displayed an instrument resembling a pen holder, with an object on it supposed to have been taken from her eye. When he used the lenses in front of her eyes again, she said she could see perfectly. . . . Chief of Police James Bouldin, with Los Angeles officers, traced Mohr through his car license. . . . He was taken to the county jail. Since that time three more counts have been issued against him by the medical board for illegal practice. . . . Defending Mohr is Milton Golden of Los Angeles, who asked to have grand theft charges dismissed on the failure of Mrs. Manker to be able to put a value on the jewelry. The motion was not allowed and the defendant was returned to the county jail, as the result of his inability to raise \$2,000 bail, pending the Superior Court trial, the date for which has not been set. (Anaheim Bulletin, April 4, 1934.) (Previous entry, December, 1931.) Mohr is also featured in the Board of Medical Examiners' pamphlet, "Eyesight Swindlers."

Said Chester Rowell in the San Francisco Chronicle of March 31, 1934: "One trouble about the proposed health insurance bill, which a committee of the Cali-

fornia legislature is considering, is that it is probably unconstitutional. Not that anybody is supposed to care, these days, whether a law is constitutional or not, but the higher courts somehow do care, and we have not got rid of them yet. So the first procedure will probably have to be, what was tried unsuccessfully once before, to submit to the people an enabling amendment to the state constitution, authorizing the legislature, when and if it chooses, to pass such a law. . . ."

"A fine of \$600 and six months in the county jail was the limit sentence imposed today by Police Judge Ryan on 'Dr.' Michael T. Larkin, 75-year-old 'divine healer,' convicted in a jury trial of practicing medicine without a state license. His attorney, Hector Baida, filed notice of appeal. An 18-year-old Santa Monica girl testified during the trial that she has disrobed on several occasions while taking 'treatments' from Larkin, who was backed by testimony of his wife in denying the charge. . . ." (Press dispatch, dated Santa Monica, April 4, printed in the Los Angeles Times, April 5.) (Previous entries, December, 1925; July, September, November, and December, 1926.)

"The Jinx of Friday, the 13th, cost Oscar de Vaughn, Oakland negro physician, just \$10,000. There is also a warrant out for his arrest. Doctor de Vaughn was arrested in connection with an illegal operation, as the result of which an Oakland woman died. . . . (San Francisco Chronicle, April 14, 1934.) (Previous entries, April, September, December, 1930; November, 1933.)

Dr. A. Castillo, San Bernardino physician, who has been confined in the county jail since December 26 for manslaughter, was reprimanded today by Superior Judge F. A. Leonard, when he appeared in court and

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asked that his probation term be modified so that he could be released immediately from jail to support his family. Doctor Castillo pleaded guilty of the manslaughter charge October 31, 1933, and was sentenced to serve one year in jail as a requirement of probation, but was given a stay of execution until December 26. The state revoked Doctor Castillo's license to practice as a physician and surgeon as the result of this case. 'Drink caused you to commit that crime, doctor,' the judge commented. 'Yet, while you were given the privilege of waiting until after Christmas to start your jail term, I am told that you deliberately went on a drunken spree before surrendering to the sheriff after you had been sentenced. If you could not refrain just after hearing the penalty for the manslaughter charge arising from your use of liquor, I do not believe you could abstain from the use of liquor after less than three months' imprisonment. I feel that it is for your own interest, doctor, for your own welfare, that you be kept where you cannot get liquor. This request for modification of sentence is premature and I must deny it. You were fortunate in not being

sentenced to San Quentin Prison.'" (San Bernardino *Telegram*, March 17, 1934.) (Previous entries, December, 1933; February, March, April, 1934.)

"Charged with performing an illegal operation, Robert Hodgkinson, 907 Vienna Street, employee of the City Engineer's office, was arrested late yesterday. Hodgkinson, alias Dr. Robert LaVerne, was accused in a warrant sworn to by Mrs. Christina Johnson, 3836 Clark Street, Oakland, a patient in the Alameda County Hospital. San Francisco police said Hodgkinson was given five years probation on a similar charge here in 1931." (San Francisco *Examiner*, March 29, 1934.)

"Damages in the sum of \$100,000 were asked yesterday by Mrs. Christine Snibley, Redwood City woman, in an action filed in the Superior Court against the Scientific Laboratories of America, manufacturers of
(Continued on Page 21)

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a reducing compound. According to the complaint, Mrs. Snibley heard of the remedy over the radio. She began taking it May 1, 1933, and last July collapsed at her home in a serious condition. . . . The manufacturers are charged with fraud and deceit in advertising" (San Francisco Chronicle, March 28, 1934). This is but one of many similar arguments supporting the urgent need of the Tugwell Bill, regulating the all too prevalent prescribing via radio. This situation is commented on in Consumers' Research, General Bulletin, April, 1934, page 9, as follows: "As the number and variety of radio programs have increased throughout the years of radio broadcasting, advertisers have injected increasing amounts of drivel into them. If this advertising were merely what the trade euphemistically calls 'puffing' (meaning any exaggeration within the scope of the copywriter's imagination), the insult to the intelligence of the radio listener might be tolerated. When potential harm is added to the insult and dangerous 'cure-alls' receive the endorsement of men whom the public should be able to trust, in view of their public position, the situation demands some defensive mechanism. . . ."

"Edgar Willard Thompson, who gained some knowledge of medicine and surgery while working some time ago as a drug clerk in San Jose, was sentenced yesterday to serve six years in McNeil's Island penitentiary for posing as Dr. Lester Parker, Denver, Colorado, physician, who died several years ago. . . . Thompson assertedly stole Doctor Parker's medical certificate in Denver. Thompson was arrested under the Dyer Act several months ago for the theft of an automobile and sentenced to serve fifteen months in Fort Leavenworth prison. In the meantime he was indicted in California and returned for prosecution. Prior to this

he was sentenced to three years for the Dyer Act violation and impersonating a federal officer in San Francisco. . . ." (San Jose Mercury-Herald, April 10, 1934.) (Previous entries under the name of Parker, July and September, 1928; October, 1931; October, 1933.) He is also mentioned in the annual reports of the Board of Medical Examiners for 1931 and 1933.

Recently came the report of the death at a Palo Alto hospital of a woman who is said to have heard a rheumatism remedy extolled over the radio, said remedy assertedly being distributed from Texas, and is alleged to be mostly cinchophen. The autopsy showed that her death resulted from "subacute yellow atrophy of the liver, due to chronic cinchophen poisoning." Our investigator reported, "This case is a wonderful endorsement of the Tugwell Bill."

"Still claiming he is the Grand Duke Michael Romanoff, the distinguished-appearing R. H. W. Albrextondare, who has gained an intimate knowledge of Los Angeles jails during recent years, was taken back to familiar ground today. In other years it was violation of state medical regulations. Today it was a fund promotion tale of \$48,000,000, supposed to have been deposited in a San Francisco bank. . . ." (Press dispatch, dated Los Angeles, April 12, printed in the San Francisco Examiner, April 13, 1934.) (Previous entries, June, 1925; March, 1926; February and December, 1927; July, 1930; June, 1932.)

The records show that W. Maynard Lukasky, after having been found guilty of violation of the Medical Practice Act, was on April 6, 1934, sentenced in Long Beach to pay a fine of \$600 and serve 180 days in the

(Continued on Next Page)

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BOARD OF MEDICAL EXAMINERS

(Continued from Preceding Page)

county jail. It is also related that on another charge (violation of Long Beach Ordinance No. C-902) he was sentenced to pay a fine of \$500 or serve 250 days in the city jail. In possession of Lukasky was said to be a diploma showing that on April 21, 1931, he had been ordained as a minister in the Church of Revelation, which was incorporated in Los Angeles, June 6, 1930, the articles stating the fee for ordination should be not less than \$10.

A recent San Francisco health lecturer added to our list of over fifty-seven varieties of drugless healing, the titles "Doctor of Orthopathy and Doctor of Threpsology." These degrees were gained after a correspondence course originating in Ardmore, Oklahoma. After an interview with our investigator, he reported: "At our suggestion, H. N. Holbrook has agreed to go back to sign painting, card writing, etc., and leave the secrets of longevity to others to teach. . . ."

What Should the Public Know About Vitamins.*—

It would be difficult indeed in this land of advertising to find a person who has not heard the word "vitamin"; or one who cannot call the vitamins, so to speak, by their first names—A, B, C, D, E, and G. Most everyone has a different vague idea of what the vitamins are and what they do. Usually the less persons actually know about vitamins the more they think they know; or at least the more they talk about them.

Many consider vitamins as "life substance" or "life-giving elements" which give health. They believe all illness to be caused by insufficient vitamins. Fairy tale conceptions of vitamins and their health values are due

*By Raymond Hertwig, Secretary of the Committee on Foods of the American Medical Association.

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in large degree to food advertising which for years has broadcast mysterious health stories about vitamins; and to the preaching of uninformed or misinformed food faddists who are convincing in language only.

The question then is: What should the public know about vitamins? The vitamins are chemical food substances occurring in extremely minute amounts in certain foods. The chemist is slowly but surely learning their identity as chemicals. It may not be long until the chemist can produce them all at will. Concentrates of most of the vitamins can now be purchased at moderate prices. It is not necessary for the public to know the chemical names or the chemical structure of vitamins, how they are isolated from foods, or how they may be prepared chemically. Leave that to the chemist. The public should know they are necessary in the diet for health; the public should know what foods the diet should contain to furnish them in abundant quantity. Include ample quantities of milk, fruits and vegetables in the diet; that should be remembered. They will provide the vitamins needed, except possibly for vitamin D.

It is possible to determine the amounts of the vitamins in foods. The quantities are expressed in vitamin units just as distances are expressed in feet or miles. Most foods have been so tested. Tables are now available stating which foods are fair, good or excellent sources of the vitamins. In the future such tables will give the number of units of the vitamins per ounce of food. Such information is helpful to the public for choosing foods to assure abundance of vitamins in the diet. The public should have such tables. The definitions of the vitamin units and how they are determined need not be known. It is sufficient that the nutritionalist knows such information.

Insufficiency of the respective vitamins causes more or less definite symptoms of illness or nutritional disease. Specialized training and experience are necessary to recognize these symptoms. It is not necessary

for the public to know the details of these symptoms. That is the business of the physician. It is sufficient to know that abundant vitamin-containing foods will prevent the occurrence of these nutritional diseases. It is sufficient to know that a well-constructed diet of meat, eggs, milk, fruits, vegetables and cereals, will provide all that the diet can for health. Partake amply of all these foods regularly. If you are ill in spite of a well-balanced diet of this kind, then see a good physician. He is the only one trained in the art and science of medicine and nutrition who can properly assist the sick.

Food advertising should tell the public only what it should know about the vitamins, as has just been stated. More than that will but confuse and misinform. The public is not specially trained to recognize symptoms of nutritional disease, to diagnose or recognize symptoms of illness, nor to properly treat illness. Food advertising should not attempt what it cannot do. Food advertising has its limitations; these limitations should be recognized by the merchant and the advertiser and abided by. The merchant should sell his wares on the basis of what they are and contain. He is not capable of prescribing for the sick. The high-minded merchant does not attempt to mislead the public by using patent medicine nostrum advertising; he does not attempt to describe illnesses and offer his foods to cure them.

The Committee on Foods of the American Medical Association is accepting foods which are truthfully advertised. The committee is rejecting foods which are advertised to deceive the public. Look for the seal of the committee on package labels and in advertising.—*Food Facts.*

Conceded Assets in Future Citizens.—The above caption is the title of an address delivered by Colonel George Filmer, president of the California Society for Crippled Children, before the Los Angeles Rotary
(Continued on Next Page)

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(Continued from Preceding Page)

Club on January 12, 1934. In this address, Colonel Filmer outlined plans for the education of the handicapped child and for the removal of his physical defects. In the course of his remarks, he said:

"There are several thousand crippled children in this State, most of them the victims of infantile paralysis. For them preventive measures come too late. For some of them there is the possibility of remedial treatment, however, and for all of them special educational facilities adapted to fit their physical condition. It is good to know that California has made provision for the treatment of crippled children, so that no child need be deprived of the opportunity for physical restoration in so far as this may be achieved by modern treatment and surgery. Legislation to this effect was enacted in 1927; the administration of the Act is the responsibility of the State Department of Health. Already a large number of children have profited by this humanitarian provision—children whose parents would not have been able to provide the costs of treatment. Hundreds of unfortunate youngsters have thus regained at least a fair degree of strength and ability to move their limbs who might otherwise have been doomed to go through life hopeless and dependent cripples.

"It is good, too, to know that California has accepted the principle that handicapped children shall have equal opportunity for education. If the child cannot go to school on account of physical impairment, the school can be brought to the child. In a number of children's hospitals in the state, special classes have been established so that during the long period of convalescence no precious school time need be lost. After returning home from the hospital, if the child is still unable to walk to school, transportation to the school is provided; in the larger cities there are special classes adapted to fit the individual needs of each handicapped child. If attendance is still impossible

even under these conditions, a teacher may be sent to the child's home to give instruction there. Any additional expense for this special educational service is paid by the state, so that the local school districts are not required to spend more for their handicapped pupils than for normal pupils. These are some of the provisions of the California School Code.

"Nor is this all; after the child has finished his regular school education and has reached the age when he should begin to earn his own living, he may apply to the State Service of Vocational Rehabilitation for advice as to what kinds of work he may be able to perform in spite of his handicap, and also for training to prepare him for the occupation selected. He is then assisted in finding a job in the line of work for which he has been fitted, and so takes his place in the world of industry and in the life of the community the same as any other citizen, earning his own way and making his contribution to the common good. . . ."

The Responsibility of the Physician in the Prevention, Diagnosis, and Treatment of Cancer.*—Cancer, it has been said, is an unsolvable problem; certainly for the problem of the cause of cancer not even an approximate solution is available. Indeed, the great central problem of life and cell growth has not yet been solved. Whether these problems are unsolvable, no one knows. The advance of biologic science is marked by efforts to explain the succession of phenomena that are laid bare as investigation proceeds rather than by the complete understanding of basic biologic problems in the final sense. In this gradual progress of science, results of great practical importance are achieved from time to time. The discovery of the tubercle bacillus did not solve the problem of tuberculosis, but it did show the right way for further

*An editorial in *The Journal of the American Medical Association*, December 30, 1933.

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study and for better control of the disease. How the bacillus produces disease and how the body reacts against the bacillus are still largely unsolved problems. The fact is that science provides no complete, no ultimate explanation of any disease; hence little wonder that the problem of cancer remains unsolved.

Notwithstanding the slowness of scientific progress, the knowledge of cancer is actually growing. The truth is that more advance has been made in detailed knowledge of cancer during the last two or three generations than in all previous time. The details of this new knowledge need not be reviewed item by item. The practical outcome is that, while any complete understanding of cancer has not been reached, the power of medicine to prevent, to diagnose and to treat cancer has been increased enormously. And the responsibilities of the physician with respect to cancer have increased likewise. On him rests primarily the duty to make sure that the individual patient receives the benefit of the knowledge and the measures that tend to prevent cancer. Briefly, prevention of cancer rests mainly on the avoidance and removal of "local irritation." Just how "local irritation" acts to cause cancer is not known, but there is no doubt that it may lead to cancer. Of the tissues liable to such irritations and chronic inflammations may be mentioned the uterine cervix with its lacerations and "chronic cervicitis"; the skin and its moles and ulcers; the mouth, the tongue; the mucocutaneous junctions; the breast and the prostate with their chronic hyperplastic inflammations. Here is indeed a wide field for constant preventive efforts by the progressive, cancer-conscious physician.

Self-evidently, on the physician rests also the main responsibility for the early diagnosis of cancer, on which in turn depends the outcome of its treatment. In connection with this matter, of such vital significance to the individual patient, the physician must consider thoroughly and conscientiously such ques-

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tions as these: Has he formulated for himself a wise and practical plan for action in all cases in which the question of cancer may arise? Are his regular patients likely to report to him promptly the appearance of any suggestive symptom or sign? If not, why not? Is he fully prepared to take without delay the necessary steps, either by himself or through competent consultants, to secure the final diagnosis in a given case with a doubtful lesion? Does he realize fully that it may be a fatal error to tell a patient with a suggestive lump or lesion somewhere "to forget it and come back next month"? Are the services of a competent pathologist readily available and will adequate specimens for microscopic diagnosis reach the pathologist promptly and in the proper state of preservation? Are the special experts to whom he may refer cases for diagnosis and treatment fully equipped in all respects for prompt and efficient service? Does he accept, in its full meaning, the statement that the treatment of cancer, surgical as well as radiologic, should be entrusted only to those who have adequate skill and experience? These are questions that the physician must answer in a practical and trustworthy manner if he is to meet his responsibility with respect to cancer as now understood. Better control of cancer by prevention, early diagnosis and prompt treatment rests with the physician.

The Concerted Attack on Cancer.—Last year about one hundred thousand persons in the United States died of cancer. The death rate for this disease is not decreasing. If anything, it seems to increase each year. That it constitutes an important public health problem cannot be denied. In California last year, there were 7,451 deaths from cancer. It was the second leading cause of death, having been exceeded only by deaths from heart disease and the circulatory system, of which there were 17,681. Seventy-five per cent

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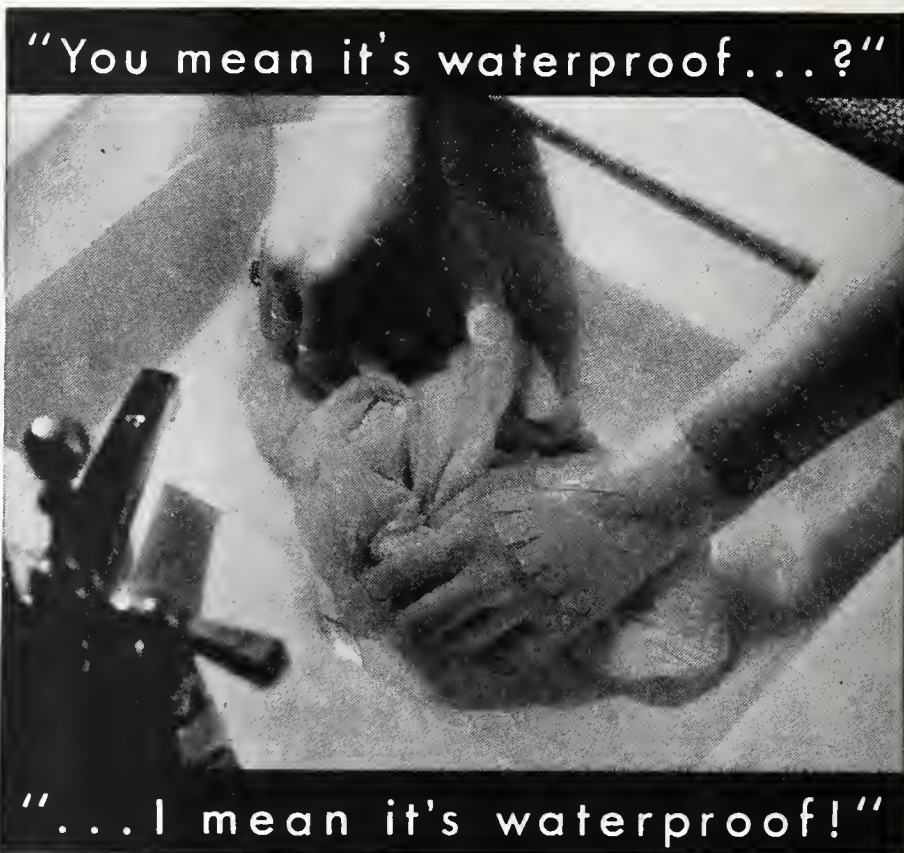


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(Continued from Preceding Page)

of all deaths in California last year were due to seven causes, as follows:

Circulatory system	17,681	26.1% of total
Cancer	7,451	11.0% of total
Diseases of the nervous system	6,387	9.5% of total
External causes (except suicide)	5,523	8.1% of total
Tuberculosis (all forms)	5,020	7.4% of total
Nephritis	4,993	7.3% of total
Pneumonia	3,973	5.6% of total

While the control of cancer depends entirely upon the individual treatment of cases, early diagnosis, proper treatment with surgery, if necessary, and adequate after-care constitute the best known factors in the control of this disease. The results to be obtained depend largely upon the knowledge acquired by the general public and the proper application of such knowledge. One of the great aims of the medical profession at the present time lies in the education of the general public relative to the need for early action in the discovery and treatment of cancer. It is obvious that many lives now lost to this disease can be saved. The California Cancer Commission of the California Medical Association has announced that it is about ready to carry on a direct campaign of education in nearly every county of California. The United States Public Health Service has taken an active interest in the prevention of cancer, and the following are extracts taken from an article on cancer which was presented recently by the service:

There can be but little doubt in the minds of the students of public health that cancer presents today the outstanding problem in this field.

One by one mastery has been gained over the various communicable diseases so that nowadays the practical prevention of most of them is within the power of any society willing to spend the funds for adequate health service. As a natural result, the advances in preventive medicine and the science of nutrition, the great decline in the infant mortality rate, coupled with a falling birth rate and improved social and economic conditions, have

had the effect of adding many years to the expectation of life at birth.

Yet, the bulwark of protection which advances in sanitary science have erected against the hazards of the first decades of life seems to have preserved the individual only to subject him to a liability of death from malignant disease which apparently has steadily increased during the period for which American vital statistics have been available; that is, since the establishment in 1900 of the registration area for deaths.

In 1900, when the registration area was first formed, the crude death rate from cancer was 63 per 100,000 population. In 1920 it was 83.4, in 1929 (the latest available figures) it was 96.1, an increase over the crude death rate of 1900 of nearly 52½ per cent.

In 1929 the total number of deaths from cancer was 111,569. This makes cancer the second most important cause of death. Heart disease alone with 245,000 deaths claimed a greater number of victims.

One of the most striking increases in the death rate has been in the so-called external forms of cancer, such as cancer of the breast and cancer of the mouth, in which, because of the superficial position, errors in diagnosis are low as compared with the possibility for error in deep-seated cancer such as those of the stomach or other internal organs.

The conclusion has been reached, after careful study of statistics, that in the 21-year period from 1900 to 1920, about two-thirds of the increase observed in cancer death rate of persons forty years old and over was due to an actual increase in the mortality of the disease. For the present it can only be assumed that the increase is bound up in some way in the extraordinary complex development of our modern social environment. Since physical, chemical and biological processes all tend to a state of equilibrium, we may also venture to hope that the cancer death rate will not continue to grow indefinitely, but in the absence of the discovery of preventive measures will sooner or later become stabilized. The fact of this increase in the cancer death rate, however, should serve as a spur to stimulate research and to justify its extension.

It is the general opinion of scientists that cancer is at first a local disease. Something goes wrong with the regulating mechanism of the body, and as a result the unwholesome persistent growth begins, and once begun it cannot stop itself, but must be removed or destroyed.

Cancer may occur anywhere on the outside or the inside of the body. It is always small in the beginning. When it occurs on the outside it is much easier to dis-

(Continued on Page 28)

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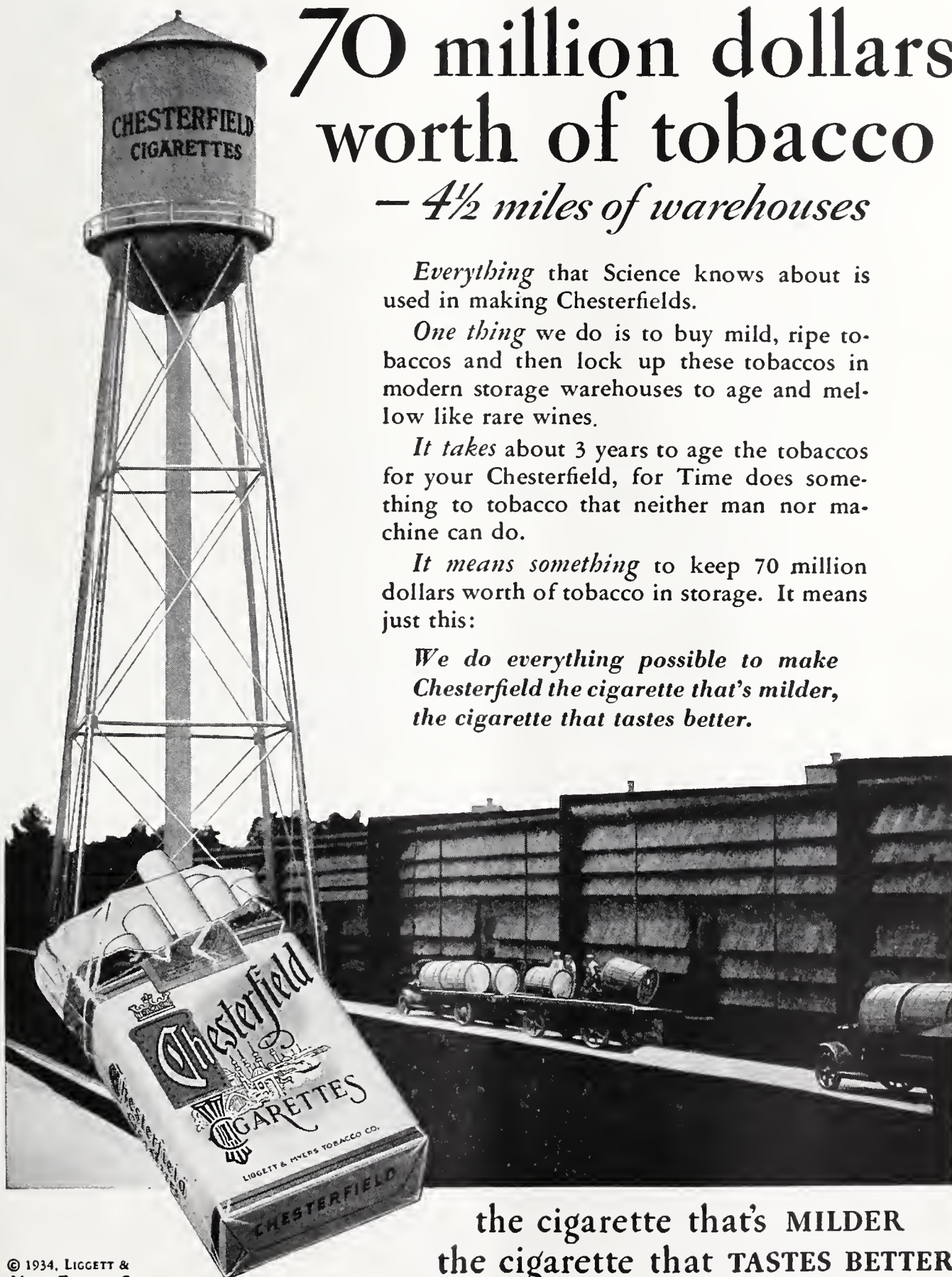
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(Continued from Page 26)

cover in its early stages. It is at this time that effective action against the growth is most likely to result in a cure. After particles of the cancer have found their way to other parts of the body and give rise to new cancers, the situation is much more serious. For, to cure the patient, it is necessary to find out where these new centers are and then they must all be removed.

Cancer is much more likely to make an attack after the age of thirty-five than before that time, and consequently the death rate is higher in certain age groups than in others. Among all deaths in men between the ages of forty-five and seventy, one in eight is due to cancer, and among all the deaths which occur among women between forty-five and sixty-five, one in five is caused by cancer. There are no reliable statistics to show how many cases occur apart from deaths.

The most prevalent site of fatal cancer is the stomach, with 38 per cent of the total deaths. The female genital organs were the site of fatal cancer in 14 per cent of all deaths. Cancer of the breast caused 9 per cent of all fatal cases. Cancer of the skin causes 3 per cent of the cancer deaths. There is evidence to show that cancer itself is not hereditary, although a certain susceptibility toward the disease seems to exist among the members of some families. This particular phase of the problem is now being thoroughly studied by a number of investigators.

One of the reasons why so many people die of cancer lies in the fact that the disease usually exists for some time before it is recognized and treated. It has then progressed from a local and small cancer to a large and dangerous one. It is, therefore, of importance that everyone should know something of the first symptoms of this disease.

If a beginning cancer was as painful as a sting, many people would go promptly to a physician and so receive the needed treatment early. But at first there is no pain or inconvenience. The symptoms develop gradually. Any lump, especially in the breast, which comes and remains for some time without satisfactory explanation, should be looked upon with suspicion. One should go immediately to a competent physician. In many cases the suspicion of cancer will have been unfounded, but it is best to be safe.

Any sore that does not heal in persons above thirty-five years of age, particularly about the tongue, mouth or lips, is suspicious of cancer. Attention should be given to a spot where a tooth is broken or where there is an ill-fitting dental plate which has rubbed until a sore has resulted.

Any irregular bleeding or abnormal discharge from any of the orifices of the body is a danger signal which should be promptly heeded.

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The organized war against cancer which is being carried on in all civilized countries aims to discover all individual cases of the disease at the earliest possible time, and to advise competent medical care for the patient. The patient must give full coöperation to the medical profession, for it is obviously impossible for a physician to render any help unless the patient applies for it. The first thing, then, is for the public to learn the danger signals of cancer and report immediately to a physician upon suspicion being aroused that cancer is present or impending.

The second line of attack is research. More facts about cancer need to be discovered; how and why it occurs; by what procedure it may be prevented and cured. There is a great deal of information upon these subjects already, but there is need for more.

Many cases of cancer can be cured, and many more prevented, if the general public will give its full coöperation to the medical profession which is striving to eliminate this disease. Physical examinations at periodic intervals made with an eye alert to cancer, afford one of the best means of protection against this disease. Such examinations should be taken once a year after the age of thirty-five has been reached.

Surgery, x-ray, and radium are the main weapons which are used to combat this disease. They are used as a preventive and as a cure. They are employed as preventives when they remove precancerous conditions, and as a cure when they eliminate cancer itself.

One of the reasons why cancer is so frequently fatal lies in the fact that those attacked are at first inclined to temporize with the condition. Some try home remedies, others put their faith in the advice of persons who know little or nothing about this subject.

When a person suspects that he or she has cancer the thing to do is to apply immediately to a competent physician or to a clinic. If he wants to find a good physician he should select one who stands well among his fellows, one who occupies a responsible position in a hospital, one who is recommended by some other good doctor.

The cancer problem is, of course, the most baffling of those in the field of preventive medicine yet remaining unsolved. We should listen to no voice of discouragement. It is only by extending the present centers of cancer research and by creating new centers that success will ever be attained. The Public Health Service will do its utmost to contribute to the fullest extent of its facilities and personnel to the result which will be fraught with such incalculable benefit.

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Progress in Medical Science Visualized at World's Fair.*—Dramatic visualization of the progress of the great strides made in the prevention and cure of disease during the past hundred years is to be found in an unusual group of exhibits at the Century of Progress Exposition.

In the Hall of Science, at a spot where wide north, south, east and west aisles cross, there is an International Square of Health. There is driven home to the visitor a thought that health is really international and recognizes no political or national boundaries.

In each of the four corners are scientific and health exhibits sponsored by research institutions in Germany, France, Great Britain, and the United States illustrating the cosmopolitan nature of scientific work dealing with preventive medicine and public health.

Three of the displays are built around the contributions of Koch and Pasteur to our present knowledge of bacteriology and the work of the Wellcome Bureau of Scientific Research of London in the development of methods of tropical disease control. In the fourth corner is the exhibit of the American Medical Association which includes life-size figures of Aesculapius, god of medicine; Hygeia, goddess of health; and Hippocrates, father of medicine. It illustrates the progress of medical practice, medical care and medical education during the last century. On one wall of this exhibit are nine small dioramas each of which presents the figure of some outstanding scientist who has contributed toward medical discovery during the last century. Prominent among these is the modeled likeness of Dr. Theobald Smith, who was the first to describe a parasite causing a disease that had two life cycles, one taking place within an insect and one within an animal. Another part of this exhibit is devoted to the periodic health examination, beginning

* Abstracted from a series of radio talks broadcast under the auspices of the State Department of Public Health, Springfield, Illinois.

(Continued on Next Page)

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(Continued from Preceding Page)

in the prenatal clinic and extending through the various periods of life up to old age.

Other exhibits in the Hall of Science feature foods and nutrition. One group, sponsored by the United States Department of Agriculture and its various bureaus, illustrates the actual production of honey by bees in a hive. Of particular interest to the mother and housewife is the display which illustrates the distribution of the various vitamins in foods. About forty different foods are reproduced in wax in natural color and size and labeled to show their vitamin content.

The principles of fire control have been used in an exhibit on cancer which is identified by a machine-made flame in the Hall of Science. It shows that cancer and fire are exactly alike in many respects; irritation, often due to carelessness or neglect, is the inciting cause; both can be stamped out completely

in the very early stages; some cancerous growths like some fires spread rapidly, others slowly. Other displays illustrate the difference between normal and cancerous growth, how the disease is spread from one part of the body to another and differentiates recognized scientific methods of treatment from so-called "cures" advocated by charlatans. A series of wax models tells the observer that moles, warts, pimples, lumps, and other similar skin conditions favor cancer. The entire exhibit emphasizes the curability of the disease in its early stages.

A stuffed "mad dog" gives realism to graphic presentation of the story of rabies which shows some of the methods of preventing and controlling the disease.

Man's progress in sanitation is the theme of another interesting group of exhibits. Egyptians, Babylonians and Romans contributed much to the knowledge in this field. A miniature of early Rome, showing the



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elaborate public water system which served the city, is striking evidence of the ingenuity of the ancients. The water supply, derived from eight different sources, was brought to the city in huge aqueducts—one furnished water for drinking, one for washing, and another supplied water for sewer flushing. The ancient city was also served by an elaborate sewerage system.

Space permits mention of only these few of the multitude of ingenious displays at the Century of Progress which tell the story of man's warfare against disease and which alone makes the trip to Chicago well worth while.—*Health News*.

Lethargic Encephalitis (Sleeping Sickness).—An alarming outbreak of lethargic encephalitis in and about St. Louis has developed into the greatest ever known within a population area so small as that encompassing the present epidemic. The cause of this disease is still unknown and its mode of transmission has not been proved; the probability is, however, that this will be found to be a question of contact, carrier, and personal susceptibility, just as with many other communicable diseases.

The apparent ineffectiveness of all treatment, the severity of its symptoms and the prolonged helplessness of its victims as they drift unconsciously to a mysterious death, or slowly awake after many days to a prolonged and mentally befogged convalescence, render lethargic encephalitis one of the most dreaded diseases known.

Elias Camerarius published the first account of this condition in 1712, giving it the name of "schlafkrankheit"—sleeping sickness. It occurred following an epidemic of catarrhal fever in Tübingen, and in a few weeks spread widely to many provinces and countries. In 1768 Lepecq de la Clôture described a "coma somnolentum" following grippe, and in 1835 Ozanann published accounts of similar epidemics as having occurred in Germany in 1745, in Lyons in 1800, and in Milan in 1802.

It was again noted in Europe following the pandemic of influenza during 1889 and 1890, and again reappeared in central Europe, France, Great Britain, and Algeria during 1917-1918 and reached North America during the latter part of 1918 and the early part of 1919.

From September, 1918, to May, 1919, 254 cases were reported in the United States, and of these, the twenty-two reported from Ohio were taken from death certificates (there is no reliable record of the number of cases). Since that time lethargic encephalitis has killed 1,460 Ohio citizens.

Nineteen cases have been reported this year from the following city and general districts:

City		General	
Akron	1	Findlay	1
Barberton	1	Piqua	2
Cleveland	3	Portsmouth	2
Cleveland Hts.	1	Toledo	1
Columbus	3		
		Guernsey County ..	1
		Morgan County	1
		Scioto County	1
		Warren County	1

The first symptoms of lethargic encephalitis are, usually, general malaise, fever and a severe headache followed by lethargy or drowsiness, vertigo, muscular weakness, ptosis, blurred or misty vision, diplopia, tremors and twitchings, soon followed by a somnolence that varies from simple sleep to a profound stupor in some cases and to coma in others. The duration of this is variable—a week, a month, or longer—and is accompanied quite often by active delirium. The patient usually can be aroused, but immediately falls back into the somnolent state.

In many cases recovery is complete within ten days or two weeks after the subsidence of the acute symptoms; in others, however, convalescence is very prolonged, and is accompanied by changes in the mental state, definite loss of function in various muscles, and obstinate palsies.

Conclusions in relation to prognosis are difficult to formulate, as the recorded experience of different observers varies greatly.—*Ohio Health News*.

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MAY, 1934

No. 5

DIABETES AND PREGNANCY*

REPORT OF FIVE CASES

By JAMES W. SHERRILL, M. D.
La Jolla

DISCUSSION by *Howard F. West, M.D., Los Angeles;*
Thomas F. Wier, M.D., San Diego; *H. A. Stephenson,*
M.D., San Francisco.

PREVIOUS to 1922 successful completion of pregnancy in diabetic women was essentially unknown. Since that date the occurrence is much more frequent, but to date the literature contains scarcely one hundred cases. There are several reasons for the infrequency of pregnancy in diabetes: first, the age incidence, and, secondly, the coexistent amenorrhea and sterility. Previous to the discovery of insulin complete amenorrhea was the rule in thoroughly controlled diabetes of reasonable severity. In the well-treated diabetic woman today, menstruation tends more toward the normal; but there is still evidence of depressed ovarian function. One frequently sees return of menstruation after instituting proper diet and insulin therapy, even though catamenia may have been absent for several years.

The occurrence of pregnancy in diabetes is to be differentiated from diabetes occurring in pregnancy. The incidence of the latter is about three times the former. The prognosis in the latter is much better than in the former.

It is important to firmly establish a positive diagnosis of diabetes mellitus in the presence of glycosuria before instituting diabetic treatment, or including such cases for publication. Confusion in diagnosis is more easy on account of the lowering of the renal threshold for various sugars during pregnancy. Galactose is excreted much more readily. It is estimated that glycosuria is produced in about 50 per cent of diabetic women, following the administration of glucose. Atypical reducing substances are very prone to occur in the urine during pregnancy; so positive diagnosis of diabetes can be made only by means of blood sugars. In reviewing the literature of diabetes and pregnancy, one undoubtedly finds a number of cases

which are questionably diabetic. Several instances of multiple pregnancies going to normal term, sometimes as many as three, are reported, which makes one very skeptical of the existence of true diabetes mellitus. Renal glycosuria, so frequently seen in pregnancy, does not carry with it a potential diabetic tendency, according to Bowcock and Greene.¹ They followed a case of renal glycosuria of four years' duration through two successful pregnancies without being able to find any indication of diabetes.

In the five cases reported here there was little question concerning diabetes. At one time or another each of them had experienced severe acidosis or impending coma, and all were insulin cases. Case No. 189 is of special interest, because of her youthful age at the onset of diabetes; diabetes was of six years' duration, and she became married three years after the onset of the disease.

LITERATURE AND SUMMARIES OF REPORTED CASES

Bowen² in 1932 made a very complete review of the literature. He collected a total of sixty-six cases in whom there were seventy-three pregnancies; forty-nine were insulin cases. The maternal mortality was 6 per cent, and fetal mortality 37 per cent. He also reported five cases of his own in which there were six pregnancies, three living children, and no maternal mortality. Joslin's³ series contains fifty-eight cases, with eighty-nine pregnancies. There were fourteen stillbirths, or 25 per cent, occurring among fifty-six pregnancies coming to term; thirteen miscarriages, or 14 per cent, and forty-two living children, or 47 per cent. There were two maternal deaths from coma previous to 1922, and none since. Williams,⁴ in his sixty-six patients, reported that 27 per cent died during delivery or shortly after term; however, many of his cases occurred before insulin was discovered. The scarcity of literature and case reports previous to the discovery of insulin is extraordinary. Beattie⁵ reported two definite cases in this journal in 1917. Meakins⁶ stated that in the records of the Montreal General Hospital up to 1923 there was not a single record of a diabetic woman going through a normal full-

* From the Scripps Metabolic Clinic, La Jolla.

term pregnancy. Since 1923 he reported twelve cases. Peco⁷ cited eight cases. Wilder reported two successful pregnancies in moderately severe diabetics. Peters⁸ in 1925 reported successful delivery in an insulin-treated case which was complicated by funnel pelvis. Fitz⁹ also, in 1925, was among the first to report pregnancy after the discovery of insulin. Quinn and Hicks's¹⁰ experience of eclampsia complicating an insulin-treated diabetic was unusual: the pregnancy ran a normal course until the latter part of the eighth month, when frequent convulsions occurred; and there were no postpartum seizures. Henry J. John¹¹ has treated seven diabetic patients with thirteen pregnancies. There are seven living children, and six stillborn and premature deaths; no maternal deaths. In addition, he has encountered diabetes during the course of pregnancy in three instances, with two living babies and one premature birth; no maternal deaths.

THE COURSE OF DIABETES AND PREGNANCY WITH REPORT OF FIVE CASES

In this series of five diabetic mothers and eight pregnancies there were no fetal or maternal deaths as the result of diabetes or pregnancy (Table 2). One mother, however, died of septicemia following an attempted self-induced abortion at the fourth month. In the five cases there was a total of eight pregnancies. Five pregnancies occurred one to five years after continuous use of insulin. Glycosuria was discovered during the course of pregnancy in three instances; two cases at the fourth month and one at the seventh month. In one of these the frank onset of diabetic symptoms occurred before term, and in two instances shortly after term. Only one pregnancy was therapeutically aborted. There were no mortalities among the five infants; all are living and well at the present writing, and none have shown diabetic symptoms or glycosuria.

It is a generally accepted fact that pregnancy in diabetic women does not usually run the full length course as in normal women. We have accurate data concerning the last menses in all of our pregnancies (Table 3). One of the cases came to term exactly on the anticipated date; another came to term one week after the anticipated date; the third patient came to term twenty-six days before the anticipated time; and the fourth came to term five weeks ahead of time. Following are the reports of five cases.

ALTERATIONS IN THE FETAL PANCREAS AND THE TRANSPLENTARY INTERCHANGE OF VARIOUS SUBSTANCES

Ibrahim¹² obtained no definite evidence of the presence of an active proteolytic enzyme in the pancreas of the human fetus till after the fourth month of intra-uterine life. Banting and Best¹³ assumed that the glycolytic enzyme would develop about the same time. They were able to prepare a very active antidiabetic extract from the pancreas of fetal calves of less than five months' development, experiments which were concerned in their early development of insulin.

Gray and Feemster¹⁴ reported hypertrophy and hyperplasia of insular tissue in an infant four days old, of a diabetic mother. They found about three times as many islets as noted in normal infants. Nothmann and Hermstein¹⁵ recently described persistent spontaneous hypoglycemia in an infant born of a diabetic mother, which necessitated three-hourly injections of glucose in order to maintain normal blood sugar. Death resulted from bronchopneumonia on the third day. The pancreas weighed 5 grams, about three times the normal, and there was distinct hyperplasia of the islets. These observers elaborated upon the theory that the increased sugar in the circulation of the mother on passing through the placenta into the fetal blood stream produced hyperglycemia and caused an increase in insular tissue in response to the increased demand upon the fetal islet tissue. Dubreuil and Anderodias¹⁶ also reported hypertrophied insular tissue in a similar case.

Britton¹⁷ made comparison of fetal and maternal blood under various conditions. Large amounts of insulin administered to the mother sufficient to produce hypoglycemia affect the fetus but slightly, especially in late stages of gestation, indicating that, as gestation advances, the fetus makes important adjustments in response to various emergency conditions that may be imposed upon the mother. Wollensen¹⁸ also found that insulin given the mother reached the fetus. Brandstrup's¹⁹ experiments showed that the placenta of the rabbit in the last quarter of gestation is permeable to the Cl ion, urea, glucose, pentoses, glycine and alanine, but impermeable to lactose and saccharose. The human placenta is permeable to urea at the time of parturition. Transplacental exchanges occur only with substances of molecular weights lower than the disaccharides.

THE CONTROL OF DIABETES BY THE FETAL PANCREAS

In 1911, Carlson and Drennan²⁰ carried out a series of pancreatectomy experiments in pregnant bitches for the purposes of determining whether or not the fetal islet tissue was adequate to control or prevent diabetes in the mother. They concluded that the pancreas of a normally developed fetus nearing term was so far developed that diabetes was prevented in the mother. That there may be transmission of insulin from the fetus to the mother, through the placenta, is shown in the report of experiments on goats by Pack and Barber.²¹ Insulin injected into the fetus lowered the maternal blood sugar.

From our general knowledge of the mechanism of diabetes, the hypothesis that the diabetic state of the mother is rendered milder by the internal secretory activity of the fetal pancreas hardly seems tenable. Before the advent of insulin, practical experience did not lend evidence in such favor. Joslin²² offered the explanation that the increased activity of diabetes was attributable to the higher diets taken. If the transplacental fetal insulin aids diabetes in the mother, it could be expected that her disease would be much less severe in the latter half of pregnancy than in the

TABLE 1.—Summary of Clinical Data in Five Cases Reported.

Case No. 3032									
Year	Date	P	Fat	Ch	Tot. Cal.	Blood Sugar	Urine Sugar	Insulin	Body Wgt
1928	July	....	....	....	....	....	....	....	120
	Sept. 11	60	30	50	710	236	Heavy	0	110
	Sept. 23	75	120	100	1780	137	0	35	113
1929	Nov. 22	70	80	100	1400	....	Heavy	35	118
1930	.....	....	....	....	....	....	.....	....	....
1931	.....	....	....	....	....	....	.....	....	....
1932	Apr. 7	....	....	....	low	225	Moderate	10	....
	May 10	50	45	90	965	118	0	30	....
	June 12	60	60	90	1130	248	Moderate	30	133
	July 23	80	70	110	1390	140	0	30	143
	Aug. 22	75	63	115	1327	....	Moderate	55	....
	Sept. 2	75	63	115	1327	250	Heavy	80	....
	Sept. 30	75	90	105	1080	....	Moderate	90	154
	Oct. 7	75	90	105	1080	200	Moderate	118	....
	Oct. 8	75	90	105	1080	115	0	78	....
	Oct. 9	75	90	105	1080	....	.....	58	....
	Oct. 18	85	105	130	1805	120	0	38	....
Case No. 189									
1925	Oct. 21	....	....	....	....	....	.....	....	102
	Dec. 2	90	138	100	1902	129	0	27	114
1926	May 6	90	190	100	2470	103	0	50	122
	Nov. 18	90	173	100	2317	83	0	60	129
1927	Feb. 27	75	171	90	2199	122	Moderate	32	120
	Dec. 15	75	171	90	2199	....	Trace	36	120
1928	Mar. 12	75	171	100	2239	....	0	38	121
	Nov. 19	75	171	90	2199	....	0	56	121
1929	Feb. 8	75	171	90	2199	....	.....	50	....
	Aug. 7	75	125	120	1905	....	Moderate	32	....
	Nov. 23	....	....	....	....	....	.....	....	....
1930	Jan. 8	80	145	125	2125	....	Moderate	44	114½
	Mar. 31	80	145	125	2125	....	0	30	117
	Apr. 5	80	145	125	2125	....	Trace	33	122
	May 10	85	145	135	2185	....	Trace	33	123
	June 15	90	100	150	1860	200	Heavy	33	123
	July 15	110	170	185	2710	105	Trace	33	138
	Aug. 1	70	170	185	2550	176	Trace	33	142
	Aug. 4	....	....	....	....	....	.....	....	....
Case No. 4378									
1930	Mar. 20	....	....	....	....	....	.....	....	135
	May 27	65	101	115	1629	280	Moderate	68	120
	Nov. 1	65	93	108	1522	91	0	10	129
1931	Jan. 16	....	....	....	....	....	.....	20	....
	Apr. 17	65	93	108	1522	....	.....	....	124
	June 1	65	93	108	1522	200	Heavy	1	134
	July 30	65	93	108	1522	....	0	8	127
	Aug. 28	65	93	108	1522	....	0	8	132
	Sept. 1	65	93	108	1522	....	0	8	135
	Oct. 1	65	93	108	1522	....	0	8	140
	Dec. 1	65	93	108	1522	....	0	8	155
1932	Jan. 14	65	93	108	1522	....	.....	8	....
	Feb. 18	65	93	108	1522	....	++	16	128
	Apr. 20	65	93	108	1522	200	Moderate	22	122
1933	Mar. 1	65	93	108	1522	....	0	16	120
Case No. 3486									
1928	June	....	....	....	....	....	.....	....	....
	Oct. 1	....	....	....	....	....	+++	....	....
1929	Mar. 13	....	....	....	....	....	+++	....	....
	Apr. 13	....	....	....	....	....	+++	....	115
	May 13	60	45	58	877	303	8.3%	....	97
	June 18	75	85	100	1465	177	0	20	106
1930	Jan. 20	75	85	100	1465	104	0	18	115
1932	June 1	....	....	....	....	....	.....	....	....
	Aug. 24	....	....	....	....	....	.....	20	....
	Oct. 1	....	....	....	....	....	.....	....	....
1933	Jan. 4	....	....	....	....	....	.....	....	....
Case No. 343									
1925	June 1	....	....	....	....	....	.....	0	....
	Sept. 12	....	....	....	....	159	Heavy	0	151
	Sept. 13	....	....	....	....	159	Heavy	....	....
	.....	....	....	....	....	315	Heavy	....	....
	.....	....	....	....	....	270	Heavy	....	....
	.....	....	....	....	....	270	Heavy	....	....
	Oct. 24	....	....	....	....	244	Heavy	....	154
	Nov. 22	....	....	....	....	....	Trace	....	....
1926	Feb. 20	....	....	....	....	390	Heavy	....	133
	May 1	....	....	....	....	....	.....	....	....
	June 12	50	32	36	632	383	Heavy	....	118
	June 17	71	127	89	1781	119	0	40	117

TABLE 2.—Course in Five Cases Reported.			
Case Number	First Pregnancy	Second Pregnancy	Third Pregnancy
3032	January, 1927, at seventh month of pregnancy sugar found in the urine. No diabetic symptoms. Normal delivery at term March, 1927.	July, 1928, onset of frank symptoms of diabetes; insulin started in September, 1928. November, 1929, three months' pregnancy. Therapeutic abortion November 22, 1929.	April 7, 1932, ten weeks pregnant. Normal delivery October 7, 1932.
3486	Normal delivery in January, 1926. No evidence of diabetes and no glycosuria during pregnancy.	June, 1928, became pregnant. Symptomless glycosuria discovered routinely October, 1928. March 13, 1928, sudden onset of diabetic symptoms. April 13, 1928, normal delivery. May 14, 1928, insulin started.	August 24, 1932, two months pregnant. October, 1932, attempted self-induced abortion followed by sepsis. January 4, 1933, died of septicemia and pneumonia.
189	January, 1924, onset of diabetes. October, 1924, diagnosis and insulin started. January, 1930, pregnancy diagnosed. August 4, 1930, normal delivery.		
343	June, 1924, four months pregnant, glycosuria noted. September 19, 1924, seven months pregnant. Symptomless glycosuria. November 22, 1924, normal delivery. April, 1926, frank diabetic symptoms, insulin started. December, 1930, died in diabetic coma.		
4378	April, 1930, onset of diabetes. May, 1930, insulin started. April, 1931, became pregnant. January, 1932, delivery by cesarean section. Normal baby.		

first, because of the more mature development of the fetal islets during the latter period; but pre-insulin experience demonstrated increasing aggravation of diabetes as pregnancy advanced. Furthermore, as pregnancy advanced we would expect a definite improvement in diabetes and lessening insulin requirement, but such is not the case. In Case No. 3032 the insulin requirement increased from 30 units during the fourth month to 118 units in the ninth. Allen's²³ experiments were in direct variance with Carlson's. He found distinct lowering of carbohydrate tolerance during pregnancy in partially depancreatized dogs. He regarded the influence of pregnancy as a toxic manifestation, infection for instance. He interpreted the alleviation of diabetes in Carlson's experiments to cachexia. Markowitz and Soskin²⁴ also found no evidence that the fetal pancreas can secrete into the maternal organism a sufficient amount of insulin to offset the diabetic condition caused by pancreatectomy. Collens and Shack²⁵ studied the sugar tolerance in two pregnancies over long periods and found a very appreciable

loss of tolerance as pregnancy advanced. They observed a remarkable transitory period of improvement in tolerance for the first two to five days postpartum.

INFLUENCE OF PREGNANCY ON DIABETES

Pregnancy aggravates diabetes. Bowen's² recent review of reported cases showed that an increased insulin requirement was the general rule. In his five reported cases an actual increase was noted; but following parturition much less insulin was required. In Peckham's²⁶ series, in six patients who received insulin the requirement varied but little throughout pregnancy, but there was tendency to smaller insulin requirement. Improvement in carbohydrate tolerance as pregnancy advanced, with postpartum hypoglycemia, was noted in two cases each by Hansen²⁷ and Wilder et al.²⁸

Immediately after delivery there is usually a very definite increase in carbohydrate tolerance, sometimes to such an extent that insulin can be temporarily lowered. There are several cases reported in which insulin was dispensed with en-

TABLE 3.—Menstruation Data in Five Cases Reported.				
Case Number	Last Menstrual Period	Anticipated Date of Delivery	Date of Delivery	Variation in Days
189	November 23, 1929	August 30, 1930	August 4, 1930	-26
4378	April 17, 1931	January 11, 1932	January 14, 1932	- 3
343	February 22, 1925	November 22, 1925	November 22, 1925	0
3486	June 12, 1928	April 19, 1929	April 13, 1929	- 6
3032	February 7, 1932	November 14, 1932	October 7, 1932	-37

tirely for a short time. The reduced insulin requirement postpartum is another good example of temporary improvement in tolerance due to relief of pancreatic overstrain. Macleod²⁹ has emphasized the possibility of hypoglycemia following delivery as due to the passage of sugar from the blood to the breasts at lactation.

LACTATION

Lactation seems to depend upon several factors, among which the most important are severity and duration of diabetes, nutritional state of the mother, and especially the problems whether or not diabetes was present before pregnancy was initiated, or whether it developed during pregnancy. In reviewing the published cases, one is struck by the fact that lactation is much more likely to be normal when diabetes occurs during the course of pregnancy. This was the situation in two of the pregnancies reported in this series, Case No. 3486 and Case No. 343. In Case No. 3486, lactation was inadequate after two or three weeks and supplementary feeding had to be resorted to. Therein entered the factor of the poor nutritional state of the mother and her inadequately controlled diabetes. Adequacy of nutrition on the part of the maternal host is a great factor in determining lactation. One of the most outstanding findings in reported cases and in this series is the failure of lactation in the diabetics who become pregnant. Of the three in this series none lactated, and in all it may be said that they were in very good nutritional state and were receiving very liberal caloric diets throughout pregnancy, except possibly Case No. 189, in whom iron-deficiency anemia was noted at the seventh month. For the same reason that pregnancy is rare in diabetes on account of hypofunction of the genital glandular structure, so is mammary function deficient. Soskin and Markowitz²⁴ observed failure of lactation in their pregnant diabetic dogs.

COMPLICATIONS OF DIABETES AND PREGNANCY

Coma outranks all other complications in diabetes and pregnancy. The cause of it is usually attributable to carelessness on the part of the patient. Acidosis predisposes to miscarriages and fetal deaths which is reasonable, since the low CO₂ combining power of the mother might be expected to affect the normal interchange and metabolism in the placenta. The death of the fetus also predisposes to acidosis of the mother. Inter-current infections are rare. Hydramnios is very common.

One very striking thing is the size of the fetus. Large babies is the rule. This may be attributable to hypofunction of other glands of internal secretion, the hypophysis and thyroid, since we know there is hypofunction of other glandular structures in diabetes. Eclampsia was noted by Quin and Hicks.¹⁰ Anemia was noted in our Case No. 189.

TREATMENT OF DIABETES

There is very little difference between the management of diabetes and pregnancy and uncomplicated diabetes. One should be cautioned against small insulin doses on the basis that the fetus will help provide the mother in her deficiency. Insulin dosage must simply be changed according to the ease with which glycosuria occurs. There is much more danger in inadequate doses than large ones, if one expects a good percentage of living babies. The diet must be liberal to provide for the demands of the fetus. It is a safe rule to give as much carbohydrate as the patient can tolerate, with reasonable limits of sugar freedom; usually 125 to 150 grams is adequate. Special attention should be paid to the mineral requirements. Edema is common. Diabetic patients are rather prone to season their food excessively with salt to help make up for the rather low calories, a factor to keep in mind in pregnancy cases. One of our cases had marked edema which, in a measure, was attributed to her habitual low protein intake. All diabetic patients should know how to test the urine.

HEREDITY AND DIABETES

Of course there is always anxiety for the infant, and justly so. Fortunately the incidence is low. Diabetes occurred simultaneously in the child of a diabetic mother at term in Ambard's³⁰ case. In Merklen's³¹ case when delivery was induced at the eighth month on account of severe diabetes, 1.2 per cent sugar was found in the infant's urine. The baby died twenty-two hours after birth. The blood sugar of the mother at the time of delivery was .418 per cent. There are very few references in the literature concerning the urine of babies at birth born to diabetic mothers. This is a problem which will bear investigation. All urine specimens of the babies in this report are clear. The writer has seen, however, fatal diabetes in an infant five weeks old, with an outstanding family history of diabetes.

In Priscilla White's³² large series of fifty-eight diabetic pregnancies, only one child became diabetic. In Wilder's³³ experience he has also seen a child of a diabetic mother become diabetic.

It must be kept in mind that diabetes is transmitted as readily through the father as the mother. The writer has at present under his care a diabetic child of six whose father had severe diabetes as early as 1921, and took insulin for five years before the child was conceived. Children of diabetic mothers develop as normally as other children.

SUMMARY

1. Eight pregnancies in five cases are reported. There were two abortions. No maternal or fetal deaths.

2. Diabetes aggravates pregnancy. There is no evidence of alleviation of diabetes in the mother on the part of the internal secretion of the fetal islet tissue.

3. Lactation is absent or scanty in the diabetic mother. Babies tend to be above normal weight.

4. None of the babies of diabetic mothers have developed diabetes. The author cites diabetes in a child of six whose father received insulin for five years before the child's conception.

5. The treatment of diabetes in pregnancy is not unlike uncomplicated diabetes.

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DISCUSSION

HOWARD F. WEST, M. D. (1930 Wilshire Boulevard, Los Angeles).—The management of the diabetic patient through the course of pregnancy is a problem of increasing importance to both the internist and the obstetrician. During the nine months that have elapsed since the presentation of Doctor Sherrill's paper and the writing of this discussion, sufficient new reports have appeared to almost double the incidence reported by him. In the year 1933 I observed six women, all of whom had previously well established diabetes, who came to term and were delivered, and a seventh patient whose delivery is expected in March or April of this year, comprising an unusual number for the period of time. One of these patients is of particular interest, in that the onset of her diabetes was at the age of ten years and she has now been delivered of two normal children. As the new generation of diabetic young women, insulin-treated from youth, are but now beginning to enter the child-bearing period, and since the older patients are also being kept in better states of nutritional equilibrium than in pre-insulin days, we may well expect an increasing number of pregnancies.

The effect of pregnancy on the preëxisting diabetes has been the subject of interesting discussion. Following the Carlson experiments and a few clinical reports on small series of patients, the impression that fetal insulin will cause an apparent improvement in the maternal diabetes seems to have become prevalent. As Doctor Sherrill points out, this apparent improvement does not manifest itself in the majority of patients, but, on the contrary, pregnancy should be looked upon as a complication tending to increase the severity of the mother's diabetes. It is quite true that in some instances the maternal requirement for insulin to control glycosuria, the food intake being constant, diminishes progressively during the latter months of gestation. A logical explanation for this, it would seem, is that the growing fetus with its normally functioning insulogenic apparatus is constantly withdrawing sugar from the maternal blood stream, sugar that would otherwise tend to appear in the urine unused. It has been estimated that a fetus weighing three kilograms will utilize from forty-five grams to fifty grams of sugar each twenty-four hours. This sugar is withdrawn from the maternal circulation, but is apparently utilized quite independently by the fetus.

It is hardly surprising that of the infants who do reach term and delivery so few, if any, have shown frank diabetes. Of the number of intra-uterine deaths which may have been caused by fetal diabetes we have, of course, no record. It could hardly be expected that a diabetic fetus could remain alive and develop.

Maternal mortality is being so rapidly reduced that, granting adequate control, we feel that the hazard to the mother is no longer really serious. On the other hand there has been, so far, but little reduction in the general fetal mortality if one includes all miscarriages. Doctor Sherrill is to be especially congratulated on his series in this respect. Early miscarriages and stillbirths are often reported. Inadequate control of the maternal diabetes and, especially, attacks of acidosis are too often responsible. Many of these accidents

should be prevented by better and more consistent management. The mother may survive—and now usually does with prompt and vigorous treatment—but the fetus often succumbs. Again, an unknown number of fetal deaths may be due to inherited diabetes. Mechanical deaths at delivery, because of excessive size of the fetus, also add to the mortality. Many of these deaths could be prevented by cesarean section. It is probable that overdevelopment of the fetus is encouraged if the maternal blood sugar is allowed to persist at high levels. Another cause for fetal distress, and possible death, is prolonged hypoglycemia due to overdosage with insulin. If the rate of fetal mortality in general is to be reduced to the ideal plane set by Doctor Sherrill, more emphasis must be placed upon the continuous control of the mother. Her diet must be adequate for satisfactory nutrition, and during the whole period of gestation she must be guarded against extreme changes in the blood-sugar level. This care, obviously, should be the responsibility of the internist. Surgical delivery in primiparae is probably the method of choice. Multiparae stand labor well unless the child is grossly oversize.

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THOMAS F. WIER, M. D. (911 Medico-Dental Building, San Diego).—Before the discovery of insulin, few diabetic women became pregnant and none went to term. Now such a woman can be assured of a living infant with little added risk.

Her pregnancy and labor, however, must be guarded against extra burden to her kidneys. We cannot depend on more tolerance to sugar from insulin increase from the infant. Increased consumption of carbohydrates during the last three months of pregnancy must be accompanied with an increased amount of insulin.

Two infants in my service were larger than average. Labors of the mothers were normal, and at or near term. Deep episiotomies healed readily. There were no unusual puerperal complications. Lactations were not dependable. Menstrual cycles were established within normal time.

Thanks to Doctor Sherrill for adding this paper to our literature. He gives the obstetrician further assurance of a successful termination of pregnancy, at or near term, in diabetic women.

✽

H. A. STEPHENSON, M. D. (490 Post Street, San Francisco).—This paper summarizes the comparative results obtained in pregnancy occurring in diabetes before and since the institution of treatment of the diabetes by insulin, which has practically made pregnancy in diabetes safe. Before its use a large percentage of cases terminated fatally for both mother and child, so that there was a tendency on the part of the obstetrician to advise very strongly in favor of the interruption of pregnancy of such patients. This treatment, however, did not always prevent a subsequent fatal outcome for the mother.

Fortunately the incidence of pregnancy occurring in diabetic patients is very low. The reasons for this have been pointed out by Doctor Sherrill. He has also shown most interesting results from experimental work done on the fetus. The protection of the mother by the fetal pancreas is well established. This change in the fetal pancreas necessitates careful study of blood-sugar in the newborn child, since a fatal result frequently occurs due to hypoglycemia. The puerperal mother may show marked changes following delivery. Personally, I have been opposed to the mother nursing her baby, as I believe that this increases the strain for her.

In conclusion, I would wish to stress the necessity of careful and close supervision of these patients during pregnancy and the puerperium, and strongly urge the obstetrician to coöperate with the physician who has given special study to the treatment of diabetes.

CERVICAL CANCER*

THE RELATION OF ITS CURABILITY AND THE DURATION OF SYMPTOMS

By DANIEL G. MORTON, M. D.
San Francisco

DISCUSSION by L. A. Emge, M. D., San Francisco;
Donald A. Dallas, M. D., San Francisco; Lyell C. Kinney,
M. D., San Diego.

IN this necessarily brief paper I wish to make just two points: first, that cancer is curable, a fact insufficiently appreciated by both profession and laity; and, second, that the possibilities of our present methods of treatment are not being realized to the fullest. The responsibility for this state of affairs lies chiefly with the medical profession, and it is up to us to rectify it. The facts which are to be presented will merely serve to elaborate these two points.

The last twenty years have seen the percentage of cures of cervical cancer rise from 15 to 18 per cent to 20 to 25 per cent, an advance of 10 per cent at most. We can hardly be proud of such a small increase. During this period much time and money have been expended in perfecting the technique of treatment, and in gathering reliable data on the results of treatment. This period has seen the descendency of surgery, the ascendancy of radiation as the favorite method of treatment. The principal gain has been in improvement in the treatment of early cases, and in the acquisition of knowledge concerning the natural history of the disease. We have learned the unfortunate fact that at least 70 to 75 per cent of women with cancer of the cervix presenting themselves for treatment have growths which must be classed as inoperable (Stages 3 and 4). Further improvement in technique may conceivably add a few per cent to the number cured, but not much more than this can be hoped for without assistance of some other kind. The assistance needed lies in the direction of earlier diagnosis. It is doubtful that discovery of a cancer cure would entirely solve our problem since the great majority of patients seeking treatment for cancer have advanced growths when first seen. No more could we expect to cure advanced cancer than to cure the terminal stages of any disease. The tools with which we work even today are by no means impotent if the disease be recognized early enough.

IMPORTANCE OF WARNING SYMPTOMS

I wish to consider at this time only one of the many factors which go toward making an early diagnosis, and that is the prompt recognition of warning symptoms. The importance of this factor is recognized in a vague sort of way; it should, however, become more real to us, for it is intensely practical and an approachable problem. There is a very definite relation between the curability of the disease and the promptness with which its symptoms are recognized.

* From the department of obstetrics and gynecology, University of California Medical School.

* Read before the Section on Obstetrics and Gynecology of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

It has been said by some that when cervical cancer gives rise to symptoms it is already advanced and that, therefore, there is little to be gained by educating women regarding these symptoms. Although true in a sense, this belief represents a dangerous attitude in that it belittles the importance of symptoms and leads to a hopeless outlook which may not be justified. While it is true that different cancers vary in the length of time required to produce symptoms depending upon their individual growth characteristics (some may do it early, others late), nevertheless when symptoms first appear the growth is usually relatively early. This assertion will be borne out by the figures which are to follow. I have collected them to show of what great importance is the lowly symptom, and to illustrate my point: that the possibilities of treatment are not being realized to the fullest.

UNIVERSITY OF CALIFORNIA HOSPITAL
STATISTICS

I have analyzed the series of cases of cervical cancer at the University of California Hospital from the point of view of duration of symptoms. After excluding a number because of previous treatment, 167 were left for consideration. These were divided as follows:

TABLE 1.—Proportion of Operable and Inoperable Cases				
	Cases	Per Cent		
Operable	{ Stage 1	19	11.4	51 cases or 30.5%
	{ Stage 2	32	19.1	
Inoperable.....	{ Stage 3	77	46.1	116 cases or 69.5%
	{ Stage 4	39	23.4	

It should be noted especially that 116, or approximately 70 per cent, were classed as inoperable when first seen; 30 per cent were considered operable, that is, relatively early.

Average Duration of Symptoms.—The average duration of symptoms for the operable group was 5.52 months, for the inoperable group 9.8 months, figures which show how negligent is woman in recognizing the warning signals of the most dread disease we know. This failure on her part is not her fault; she simply does not know. This state of affairs represents little or no improvement over conditions present many years ago. In 1923,

Proportion of women having symptoms for 1 month or less - 2 months or less etc. up to 1 year

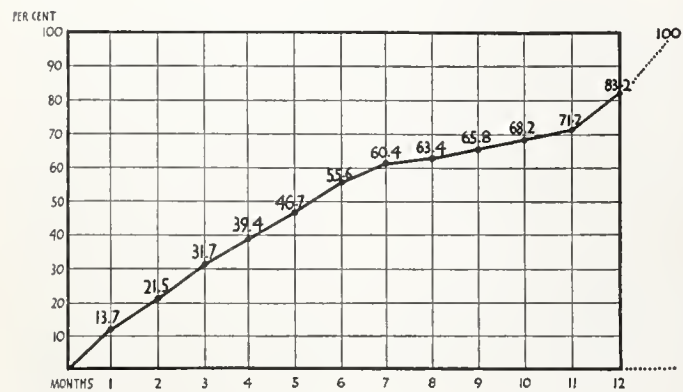


Fig. 1

Proportion of the four stages of advancement which had symptoms for 0-3 months -- 3-6 months etc.

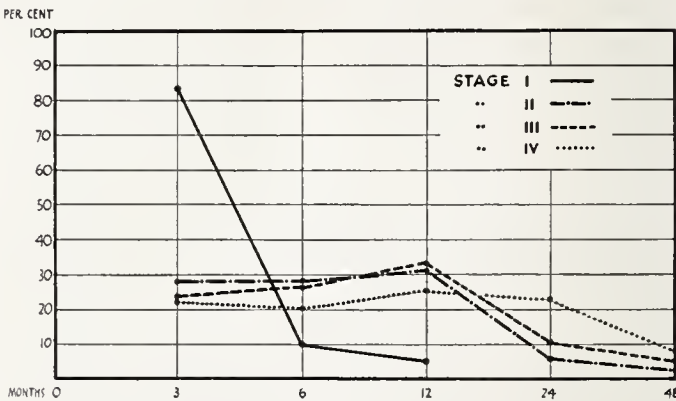


Fig. 2

Martzloff reviewed the cases at the Johns Hopkins Hospital, which had occurred there from approximately 1900 to that time. He found that the average duration of symptoms, without regard to operability, was seven months. It would appear that women recognize warning symptoms no better now than then.

The cases were then grouped as in Figure 1; the small proportion of cases in which symptoms had been present for two to three months, or less, is worthy of note. Furthermore, it is seen that almost 20 per cent of the women had had symptoms for over a year before seeking treatment.

Figure 2 was compiled to show the proportion of Stages 1, 2, 3, and 4 cases which had had symptoms from 0-3 months, 3-6 months, 6-12 months, etc. It merely establishes the general law that "the shorter the duration of symptoms, the earlier is the growth likely to be," and, conversely, that "the earlier the growth, the less likely are the symptoms to have been of long duration." Thus, by far the greatest proportion of the very early (Stage 1) cases had had symptoms for three months or less. The parallelism between the curves for the more advanced cases illustrates well the difficulty in classifying clinically the advanced growths.

GOOD RESULTS IN THOSE WHO CAME EARLY

For purposes of exposition, I have considered two months as a reasonable length of time for women to have symptoms before becoming alarmed enough to consult their physicians. What are the facts about this group? There were thirty-six such patients, which constitute 21.5 per cent of the entire series. Table 2 shows the division of the thirty-six into the various stages of advancement.

The majority of these cases were early (60 per cent), as one would expect. The fact that there were a greater proportion of Stage 3's in this

TABLE 2.—Having Had Symptoms for Two Months or Less

	Cases	Per Cent	
Early 58.3%	{ Stage 1	14	38.8 or 73.6% of all 1's }
	{ Stage 2	7	19.5 or 21.8% of all 2's }
Late 41.7%	{ Stage 3	11	30.5 or 14.3% of all 3's }
	{ Stage 4	4	11.2 or 10.2% of all 4's }
Total	36	100.0	

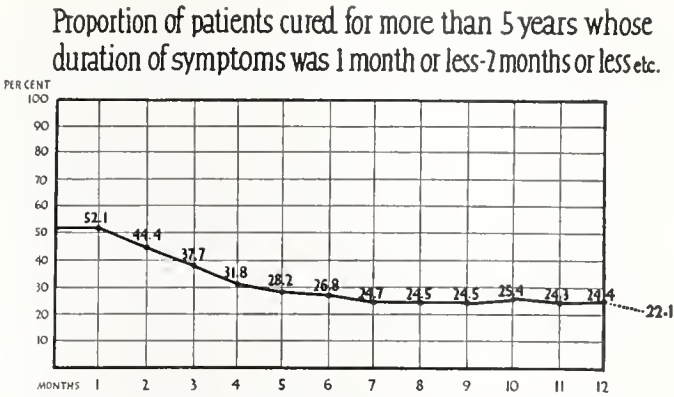
group than of Stage 2's probably represents clinical error in diagnosis of degree of advancement, error which is unavoidable in any clinical grouping. Let us see, then, what actually happened to these thirty-six women.

Sixteen of the thirty-six, or 44.4 per cent, survived beyond five years, regardless of the stage of the disease. In other words, if all women who presented themselves with cervical cancer had had symptoms for two months, or less, the absolute cure rate (*i. e.*, per cent of all cases seen) would be 44.4 per cent or thereabouts, instead of the 20 per cent which it now is. I desire to emphasize that this high percentage of cure has little or nothing to do with the kind of treatment or the efficacy of any particular method; it is related solely to the fact that these women sought treatment not more than two months after the onset of symptoms. Practically all good clinics obtain from 20 to 25 per cent of cures of all cases of cervical cancer applying for treatment; a similar analysis of their cases would unquestionably reveal a correspondingly high percentage (*i. e.*, 44.4 per cent) of cure of those whose duration of symptoms was less than two months. The explanation lies in the fact that a large proportion of such a group have early growths. In this connection, however, it is interesting to note that fifteen of the group having had symptoms for two months or less were considered inoperable, yet three (*i. e.*, one-fifth) were cured, which is a larger proportion of cures than one expects to get in inoperable cases.

Figure 3 simply amplifies the idea, shows the number of five-year survivors whose duration of symptoms before treatment was one month or less, two months or less, etc. Noteworthy is it that after women have had symptoms for six months or more, the possibility of cure has about reached the baseline which was obtained for the entire series—that is, a little better than 20 per cent. Before that time, the results were steadily better, the shorter the duration of symptoms.

INCREASE IN THE POSSIBILITIES OF CURE

The tremendous increase in the possibilities of cure which could be realized if women were educated to consult their doctors at the onset of symptoms has been illustrated by actual results. Such facts cannot be brought before the profession



The end figures represent the true state of affairs for the entire series --- Absolute cures 22.1%

Fig. 3

too often: they are at once a challenge and a hope. Marvelous benefits have accrued to civilization through educational programs regarding the proper methods of preventing smallpox, malaria, yellow fever, diphtheria, and tuberculosis; why not cancer? Certain it is that women lack appreciation of the significance of intermenstrual bleeding or foul discharge. "Bleeding" to a woman is simply menstruation, and excessive or continuous "menstruation" she usually attributes to some complication of pregnancy, or to the "change." There are those, of course, who put off seeing their doctors because they suspect that they have cancer, and are afraid to have their worst fears confirmed. This attitude is a product of misinformation; few would feel that way if they realized how favorable is the prognosis when the disease is discovered in its very early stages. I realize that it is an easy matter to say "Educate women," and quite another to accomplish it. I hold that much of the time, energy, and money now expended in perfecting the technique of treatment should be diverted to the root of the trouble—the lack of common information regarding warning symptoms of cancer. But the man in practice may ask, "What can I do about it? I have no opportunity to help educate people, nor to institute educational programs." There is much that he can do.

THE PHYSICIAN'S PLACE IN THE FIGHT AGAINST CANCER

The physician has many opportunities to advance the fight against cancer of which he often does not avail himself. Frequently, women consult physicians merely because of fear of cancer; when nothing is found, they may actually apologize for taking up the doctor's time—a common experience; the doctor makes a perfunctory examination, assures them that nothing is wrong, and sends them on their way. Other women consult their doctors because of excessive periods; and they are wiser than the doctors who tell them that "It is only the menopause." These are golden opportunities: such women should be congratulated on their wisdom, informed of the significant symptoms of cancer, and encouraged to return for periodic check-up; they deserve careful examination in every instance. The doctor should know, if the woman does not, that while excessive periods

TABLE 3.—Results

Stage	Cases	Five Years Plus	Comment
1	14	12	One died of intercurrent disease
2	7	1	One operative death
3	11	3	Of the total of 7, which did live, in this group
4	4	0	
Total	36	16	Or 44.4 per cent

are frequently associated with menopausal changes, they are never normal. These are things the man in practice can do. He can be certain that all who consult him are adequately warned, adequately informed. He can be certain that every unexplained bleeding is properly investigated. Doctor Schulze recently found, in reviewing the causes of bleeding after the menopause, that two-thirds were malignancies of one type or another. If a man is in doubt about a diagnosis, or having made it, is unprepared to give the patient the benefit of the best modern treatment, then free consultation becomes a moral obligation. I have mentioned these points because they directly apply to us all, and because they are practical.

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DISCUSSION

L. A. EMGE, M. D. (2000 Van Ness Avenue, San Francisco).—Doctor Morton's paper is complete in itself. There would be no need for discussion were it not to emphasize the great need for a propaganda to fight cancer, for this fight has barely begun. Neither the profession at large nor the laity fully realize this. Because of these sporadic attempts at propaganda, the profession sits quietly back and is content with the efforts of a few. Cancer, and particularly such accessible cancer as that of the cervix, would offer a much higher percentage of cures if more often an early diagnosis were made. To arrive at such a goal, the attention of the profession, as well as that of the laity, must be aroused to the great need of a concerted action between these two bodies in fighting the most dreadful destroyer of life and happiness. Such timely presentations as this are a challenge to the profession that, unless an even greater vigilance and a greater consciousness of duty are practiced, the medical profession will not have fulfilled that great trust with which it has been charged. Every medical student has this impressed upon him. The young graduate must be saturated with the story of cancer. Why is it, then, that the seasoned practitioner is not always alert to the ever-present danger of cancer? Why is it that the busy doctor should be neglectful of his duty in proving, or disproving, the presence of cancer with all the means he commands whenever the slightest doubt as to that presence arises? Whatever the answer, there can be no excuse offered on our part.

The laity fears cancer, and it is this fear that keeps the average individual from seeking information. Doctor Morton is correct in saying that some of the time and money now expended in perfecting the technique of treatment should be diverted to the education of the laity. This alone will offer some hope to effectively battle the question of fear and ignorance. What good will the best of technique be when those afflicted with cancer, on whom it can be used, have gone beyond curability? The fact that cancer is curable when discovered early must, therefore, be impressed upon the laity by a concerted propaganda, and much of this must be spread by the practitioners in city, town, and hamlet.

I am delighted with Doctor Morton's presentation in all its clearness and straightforwardness. He does not mince words. His message carries at once a rebuke and a challenge well worth our sincerest consideration and efforts.

DONALD A. DALLAS, M. D. (490 Post Street, San Francisco).—Doctor Morton's paper is a timely one, indeed, and is a clear and concise exposition of the facts regarding the curability of cancer of the cervix as related to the duration of symptoms. His request that each physician assist in his own small way, as an individual, in bringing to the attention of every woman patient the cardinal symptoms of carcinoma of the cervix is a reasonable and practical one.

Physicians themselves are often woefully ignorant of the true situation when caring for the woman with

symptoms of cancer of the cervix. I doubt whether there is a gynecologist of experience who has not seen patients who have been told by their physicians that they were only going through the menopause, or who have had supravaginal hysterectomy or ordinary complete hysterectomy done when the patient was actually suffering from carcinoma of the cervix and the physician failed to recognize it. The cervix must be inspected as well as palpated, and biopsy is essential in many cases if cancer of the cervix is to be recognized early. If the physician cannot himself carry out the proper treatment, it is imperative that he refer her to someone who can do it. Funds might well be diverted from research to the education of women and of the medical profession as a whole.

Simple cauterization of the infected or lacerated cervix, especially after childbirth, will undoubtedly prevent the later development of cancer in many instances, and every physician who assumes the responsibility of treating the female organs of reproduction should be thoroughly trained in the indications for the technique of cauterization of the cervix.



LYELL C. KINNEY, M. D. (1831 Fourth Street, San Diego).—The facts presented in Doctor Morton's paper are among the most important weapons in the control of cancer. We have long known that the majority of women with cervical cancer first come for treatment in the advanced and unfavorable stage, but we have not known how rapidly these women become inoperable or reach the stage unfavorable for radiation. Too often patients are encouraged to wait for one or two periods in the hope that menstrual irregularities will correct themselves before an examination is made. Very frequently patients with a suspicious erosion are given palliative treatment for two or three months before a biopsy is taken. Doctor Morton has shown that in both instances the reasonable hope of cure has been lost by temporizing. It is a very serious responsibility to allow any delay in the radical treatment of cancer of the cervix in face of the fact that the curability of cancer drops from 75 to 15 per cent within two months after the initial symptoms.

The control of cancer in the cervix rests almost entirely on the family physician. He can very largely prevent cancer of the cervix by insisting on the early treatment of lacerations, erosion, and cervicitis. He can greatly increase the possibility of cure if he will educate his patients to recognize the immediate danger of any menstrual irregularity. He can save many of his patients from hopeless incurability if he will examine every case of irregular bleeding, and insist on an early biopsy in every suspicious case. Such preventive measures, plus early adequate treatment, will cause an impressive drop in our cancer mortality.

MAGNESIUM SULPHATE—ITS INTRAVENOUS USE IN HYPERTENSION AND ALLIED EYE CONDITIONS*

By HENRY H. LISSNER, M. D.

Los Angeles

DISCUSSION by E. M. Lazard, M. D., Los Angeles; Hyman Rapaport, M. D., Los Angeles; Gabriel Segall, M. D., Los Angeles.

IT is well known, from past experiences, that the profession is slow to accept any new idea as to the application of a certain drug to the treatment or alleviation of a given condition unless the recommendation is based upon proved experimental or clinical observation.

* From the department of cardiovascular disease, Cedars of Lebanon Hospital, Los Angeles.

* Read before the meeting of the American College of Physicians, San Francisco, April 4-8, 1932.

EARLY INVESTIGATIONS

In this regard, magnesium sulphate has shared the fate of many other remedies. It was known to produce purgation when administered *per os* as long ago as 1675, but it was not until the early part of this century that a new impetus was given to experiments by J. Loeb as to the constitutional effect of magnesium on protoplasm when numerous studies were inaugurated on animals.

Matthew Hay² called attention to its toxicity when injected intravenously, and showed that it was less toxic when injected slowly. Laubischer³ demonstrated its curare-like action, and Matthews and Brooks¹ studied the cause of the sudden fall of blood pressure, and its depressing action upon the motor nerve endings. Meltzer and Auer⁴ confirmed these observations.

The influence of magnesium sulphate upon the heart, is, according to Matthews,⁵ "first, a depression in tone (dilatation, weakness, and slowing); second, some interference with the conduction of the cardiac impulse (incoördination, independent rhythm of the auricles and ventricles, and partial or complete heart-block); and, third, a depression of all spontaneous movements."

These observations were made upon the exposed heart by dropping the solution of magnesium sulphate upon the heart muscle, and not by intravenous injection. It must be concluded from the above experiments that the effect was that of a direct toxic action upon the heart muscle. In conjunction with this same experiment, Matthews showed that certain drugs are of great assistance in restoring the automaticity of the heart after this magnesium standstill. Adrenalin came first in order, followed by barium and calcium; and atropin, when added to any of these, greatly increases its efficacy.

SCOPE OF THIS STUDY

The opinions expressed herein are the result of an experience extending over nearly seven years, and based upon the intravenous administration of several thousand injections of 10 cubic centimeters of 10 per cent solution of magnesium sulphate.

In so far as it is possible to compare the clinical experience with laboratory experiments, the following observations must be considered as having a definite value in the treatment of hypertension. They do not bear out to a very great degree the more profound and positive findings of the experimental side since, on the one hand, we are dealing with toxic doses of the drug, while, on the other, we are dealing with definite doses of therapeutic value.

CLINICAL FINDINGS

Clinically, we found that the relief of the nervous manifestations of hypertension follows in line with the experimental data. There is definite evidence of the control of the muscular twitching and convulsions of the pre-uremic and uremic cases, and marked influence on the headache of hypertension, which is manifest by throbbing and intolerable head noises. Furthermore, there is definite relief from the peculiar epigastric sensa-

tion such as is complained of in the early stage of uremia, the exact nature of which is not clear from its clinical aspect, nor can the patient describe it from its subjective manifestations. We have noticed this particular clinical sign in hypertension of various types as one of the earliest warnings of an impending uremia.

The clinical experience with the effect of magnesium sulphate upon the heart does not follow the experimental conclusions. In the several thousand injections which we have given, there has been no definite expression of arrhythmia, heart-block, or any other depressive cardiac manifestation, except in two cases: one of coronary artery disease, and the other coronary thrombosis where, before one-half the usual dose of magnesium sulphate was administered, the patient fainted or had an apparent cardiac collapse. These patients were repeatedly given the full dose of magnesium sulphate after this first experience without any untoward effect. The question arises as to whether these were psychic in origin, and not the direct effect of the salt. We have also made electrocardiographic studies on a series of patients before and immediately after the injection of magnesium sulphate, and could find no evidence of change in the heart's action which would warrant the opinion that the intravenous injections of magnesium sulphate in therapeutic doses had any effect upon the heart in any way. There was no change in conduction, rhythm, or in the type of ventricular contraction.

The experience as a diuretic does not bear out that as expressed by Lazard⁶ in eclampsia. There was no increase in the urinary output, and no reduction in edema in the cases in which there was cardiac decompensation, hypertension and kidney involvement.

In the true eclamptic, the kidney presents an entirely different pathological picture than that which is found in the advanced nephritic. This difference in pathology will explain very satisfactorily the response of the former to any diuretic, and the absolute lack of response of the latter. Another explanation for the diuresis in eclampsia may be the larger amounts of magnesium sulphate and water injected, and the increased frequency of its administration.

The intravenous administration of magnesium sulphate does not have any influence upon the bowel.

ITS USE FOR HYPERTENSION

The effect of the injection of magnesium sulphate in therapeutic doses on hypertension follows in direct line with the experimental data as compared with curare. There is, at first, a drop in blood pressure, which takes place anywhere from ten minutes to one-half hour following the injection. This drop varies in degree from 10 to 40 millimeters of mercury on the baumometer. Observations over a long period of time, and with approximately one hundred patients, show that they do not all have this initial drop. Some patients may require several injections before any noteworthy drop in blood pressure is observed.

In those cases where there is an immediate drop in blood pressure, there is a gradual return to the previous reading in several hours. In others the preliminary reduction may be sustained. Where this occurs, the administration of magnesium sulphate need not be given as frequently. The determination as to the amount to be given, and its frequency, depends upon the reaction as noted clinically from time to time. High degrees of blood pressure require more frequent injections than do the more moderate elevations. In our series of cases we have seen blood pressures, particularly of the menopause type, so high that we were unable to measure them on the baumometer, which registered up to 300. The daily administration of therapeutic doses in such cases reduced this pressure to 220 in two weeks' time. There was at no time any evidence of mental or suggestive influence such as that to which David Ayman calls attention. We have had, in similar cases, to use a daily injection for a period of at least thirty days, when the dose would gradually be decreased to three a week, two a week, one a week, and then as we found it indicated. After the blood pressure reached a fairly normal or stationary level, the injections were stopped, and the patient was advised to report for observation every month, if the clinical subjective symptoms did not return. If, however, the patients remained away too long they usually returned with hypertension as fully developed as it was before the treatment was inaugurated.

Not the least astonishing, and probably the most important effect of the intravenous injection of magnesium sulphate, to which special attention is called at this time, is its influence on the eye changes of hypertension and nephritis.

Wegener⁷ expresses the opinion that the outcome "in cases of typical retinitis of malignant hypertension is almost invariably fatal within a relatively short time." Keith, Wegener and Kernohan have expressed the opinion that "very few of the patients live more than from eighteen months to two years, a retinitis usually persists in spite of treatment, and the hypertension itself does not yield satisfactorily to any measure for its control."

This view is also expressed by Osler⁸ in his "Practice of Medicine," wherein he makes the observation that "patients seldom live more than two years from the time albuminuric retinitis has been discovered. There are, however, certain cases of retinitis which would probably have been discovered under the more systematic ophthalmological examinations of the milder cases of nephritis, and these would probably reveal instances in which this retinal condition might last longer."

In the report of Lazard⁶ on the magnesium sulphate treatment of eclampsia, in one of his cases which came to autopsy, he noted that "the brain is interesting, for in the presence of an almost complete anuria, extensive and practically total destruction of the kidneys and liver, it was relatively dry." This fact at once initiated the thought that if the osmotic power of magnesium sulphate was sufficient to influence the brain in a condition which is known to give a definite edema

or so-called "wet brain," the application of this fact for the relief of intra-ocular tension, edema of the retina and hemorrhage, was thought possible. With this object in view, patients were referred to eye specialists for observation, and by them in turn referred for treatment, in order to observe the effect of magnesium sulphate upon these conditions.*

COMMENT

This report, which is somewhat in the nature of a preliminary outline of experiences, is made with the statement that no effort to classify the various etiologic factors of hypertension has been attempted. It is generally conceded that high blood pressure is a symptom and not a disease entity. It is to be regretted that, owing to the very frequent apprehension of both patient and physician, many patients are allowed to develop a blood-pressure phobia, which of itself has a direct influence upon the maintenance of an abnormal blood pressure, and which greatly handicaps any effort upon the part of the physician to otherwise control the nervous factor.

On the other hand, there is no therapeutic measure reported in the voluminous literature on this subject which, by comparison, has given such satisfactory amelioration of the serious complications of hypertension as we have found in our experience with magnesium sulphate.

The clinical studies of David Ayman on various remedies, and his latest study on bismuth, besides other similar negative work, lead to the conclusion that there is no drug which actually ideally influences blood pressure, or has even the slightest semblance of curing it. Magnesium sulphate is not here advocated as a cure; it is simply recommended, in the light of clinical experience, as a purely palliative means for the relief of some of the more annoying symptoms, and the control, to a very marked extent, of the eye changes associated with the hypertension of cardiovascular and renal disease.

IN CONCLUSION

From the clinical experiences herein outlined it would seem that the following conclusions are justified:

1. Intravenous injection of magnesium sulphate exerts a palliative effect upon the reduction of hypertension and its secondary symptoms.
2. It reduces intra-ocular tension.
3. It exerts a marked influence upon the course of the eye changes and aids absorption of exudate of retinal hemorrhages, with the hope of prevention of threatened blindness.
4. There are no untoward symptoms from frequent injections of controlled amounts of magnesium sulphate intravenously.

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DISCUSSION

E. M. LAZARD, M. D. (1930 Wilshire Boulevard, Los Angeles).—The author's experience with the intravenous use of magnesium sulphate in hypertension and allied eye conditions is of much interest to those of us who have been so greatly impressed with its value in the preëclamptic toxemias and eclamptics for the past ten years. The clinical results reported by Doctor Lissner, viz., control of muscular twitching, relief of headache, and of epigastric distress (all of which, in the pregnant woman, are premonitory signs of an impending eclamptic attack), serve to confirm the results which we have had with the intravenous magnesium sulphate treatment of eclampsia and pre-eclamptic toxemia.

That the author has not observed the diuretic effect, and the comparatively rapid reduction of the edema, which we have obtained in the eclamptics, is due, I believe, rather to the small doses of the salt that he uses than to the difference in the underlying kidney pathology. His regular dosage is 10 cubic centimeters of a 10 per cent solution, not oftener than once daily, whereas our standard dosage is 20 cubic centimeters of a 10 per cent solution repeated, as necessary for the control of symptoms, frequently, twelve or fourteen such injections being given in twenty-four hours.

That these results have been obtained in such chronic conditions as essential hypertension and chronic nephritis, further justifies its use in the eclamptic syndrome which so closely resembles the clinical picture in these nonpregnant individuals, even though the etiologic factors in the various types of the eclamptic toxemia are so different.

I can also confirm the last conclusion in Doctor Lissner's paper that "there are no untoward symptoms from frequent injections of controlled amounts of magnesium sulphate intravenously." In many thousand injections of magnesium sulphate in the eclamptic toxemias, we have never observed any bad effects that could be attributed to injections in the proper dosage.

✽

HYMAN RAPAPORT, M. D. (1048 Temple Street, Los Angeles).—About three years ago, after learning of Doctor Lissner's favorable results, I began to use magnesium sulphate intravenously in hypertension. I limited its use to those hypertensives whose outstanding complaints were dizziness, severe throbbing headaches, and extreme irritability. The usual dose given was 10 cubic centimeters of a 10 per cent solution daily.

The results were gratifying. There were no toxic reactions, but there were some complaints of a feeling of warmth following the injection. This discomfort was greatly alleviated by injecting the solution very slowly. The injections invariably relieved the dizziness, headache, and irritability, some of the patients having markedly improved after the first administration. It was notable that the relief of the symptoms was out of proportion to the drop in the blood pressure.

The irritability in hypertensives is apparently due to an overstimulation of the nervous motor mechanism; and since this is the point depressed by the magnesium, hence the relief of the irritability. Doctor Lissner's observations on the reduction of intra-ocular tension are interesting, and should stimulate further clinical study. From my personal experience with the use of the magnesium sulphate intravenously in hypertension, I am convinced that it occupies a definite place in the armamentarium of the therapeutics of hypertension.

GABRIEL SEGALL, M. D. (1930 Wilshire Boulevard, Los Angeles).—Any medication or drug which may influence the course of hypertension beneficially, or alleviate the symptom-complex of hypertension, should be given serious consideration.

Doctor Lissner's study and experience with magnesium sulphate must be considered an advance in the approach of coping with the therapeutic problem of hypertension. Inasmuch as the state of hypertension has a variety of etiologic factors, it is natural that there cannot be one type of medication suitable to all forms of the condition. However, we know that, no matter what the etiology in such cases is, there are two main factors involved: hypertonus of the arterial wall of the vessels and angiospasm. Even if there is no atheromatosis primarily present, both of those factors may lead to degeneration of the intima of the vessels, and eventually to systemic hypertension. It has also been my experience that magnesium sulphate, used according to the method and technique of Doctor Lissner, has an excellent effect upon the reduction of hypertension and its secondary symptoms. The mode of action is difficult to determine; the quantity of magnesium sulphate used could hardly be considered sufficient to exercise such a sedative and hypotensive action. The results of magnesium sulphate in uremia and preuremic conditions may lead one to the assumption that magnesium sulphate acts against edema of the brain. It probably relaxes the vascular spasms by direct action on the vasomotor center of the medulla. I have never observed any discomfort or untoward effects in any of my patients treated with this method.

Therefore, there being no contraindications present for the use of an apparently helpful and harmless drug, it would seem that this method advocated by Doctor Lissner should be applied in the treatment of hypertension.

CHOLECYSTIC DISEASE IN PIGS, SHEEP
AND CATTLE*

By STANLEY H. MENTZER, M. D.
San Francisco

IN a previous study I called attention to the incidence of cholecystic disease in pigs, sheep, and cattle slaughtered in an abattoir in St. Paul, Minnesota. My present study was conducted in San Francisco and repeated because of an opportunity to segregate the pigs according to their food supply. Studies of the incidence of gall-stones in man, in varying geographic areas, seem to indicate that food plays a significant part in the etiology of gall-stones. Hence, the privilege to observe controlled food sources in animals in relation to the incidence of gall-stone formation appeared opportune.

MATERIAL FOR THE STUDY

The pigs arrived in the abattoir in groups and were kept separate during their preparation, so that we might adequately study the effect of grain and swill feeding in relation to cholecystic disease. There were 712 grain-fed and 252 swill-fed hogs. Gall-stones were found in seven, an incidence of 0.72 per cent. Approximately 60 per cent of the stones occurred in the swill-fed group, data which proved surprising, for we expected that the incidence in the swill-fed hogs would be much

* From the department of surgery, University of California Medical School, San Francisco.
Note.—This article from a member of the California Medical Association has been accepted in order that these studies shall find a place in the medical literature. The value of the work lies in its application to medicine, because the data contained therein is to be used as the basis for future comparative studies.

greater. However, three of the swill-fed pigs had cholesterol stones in their gall-bladders, while four animals had bilirubin calcium stones, all of which came from grain-fed hogs. Obviously, food seemed an important factor in relation to the type of stone formed. Its significance is lessened, however, when we recall that Gauss and Davis found cholesterol-rich stones in twenty-one of 2,067 cattle (1 per cent). Cattle are not fed fat-containing foods, yet all of the stones in Gauss and Davis' cases were fat stones. In my previous study I found that 0.8 per cent of five thousand cattle had gall-stones, but the majority of stones from the gall-bladders of cattle in that study were bilirubin calcium stones. Totten found calculi in twenty-three of 5,725 cattle (0.4 per cent) in a Minnesota abattoir, but he did not specify the type of gall-stone encountered. In my previous study, 8 per cent of the pigs had gall-stones while only 0.72 per cent of the present group had them. The explanation of this apparent discrepancy was evident when the sex and pregnancy factors were studied, however. Sows predominated in my St. Paul study. Only 20 per cent of the pigs slaughtered in the San Francisco abattoir were females. I had believed that the type of food was the most important single factor in gall-stone formation, but these data seemed to show that sex, and particularly pregnancy, were of greater significance. Pregnancy was the most important factor in association with gall-stone disease in cattle also, as Gauss and Davis' statistics showed. They found biliary calculi in twenty-one of 2,067 cattle; of these, seventeen occurred in adult cows that had calved and eight were pregnant at the time. Heifers (adolescent females) comprised the greatest number of cattle slaughtered, yet no stones were found in them. However, sex and pregnancy are not wholly important, for biliary calculi were found in 1.2 per cent of the bulls and 1.0 per cent of the steers in comparison with 2.3 per cent of the cows.

Four hundred adult sheep's gall-bladders were examined in the present study and calculi found in seven, an incidence of 1.75 per cent. With one exception all of the stones were small, spiculed bilirubin calcium stones, and usually only one stone was found in a specimen. One hundred gall-bladders from lambs, less than eight months old, were also examined, but none contained biliary calculi or other pathology.

Thirty-seven cows and forty-six steers were also investigated, but no stones were found in the gall-bladders of any of these animals. Only a small number of cattle were studied in this series, for a very large group were included in my previous work. The majority of stones in the former group were bilirubin calcium stones which were found almost entirely within the gall-bladder cavity. In Gauss and Davis' study of cattle gall-bladders, stones were found in seventeen instances, and in four additional cases they were recovered from the bile ducts. All of the stones in their series were apparently cholesterol stones.

Of greater interest and surprise was the large number of instances of cholesterosis of the gall-

bladder found in pigs and sheep (Fig. 1). I was astonished to find grossly visible lipoid (cholesterosis) in 213 of the 964 pigs (22.1 per cent). It was also surprising to note that cholesterosis occurred as frequently in the grain-fed as in the swill-fed hogs. The significant fact lay in the observation that almost all of the gall-bladders showing cholesterosis were found in hogs that had been pregnant, usually many times. Five instances of cholesterosis were found among the four hundred adult sheep's gall-bladders, while none was encountered among the lambs. Unfortunately no record was available of the pregnancy factor in the sheep. And, to disturb my thesis most, no instances of cholesterosis were found among the thirty-seven cows' gall-bladders, while two were recovered from the group of forty-six steers. Whatever preconceived notions I may have entertained relative to food or pregnancy factors as etiologic agents of cholesterosis in domestic animals, were rudely shattered by these facts. That there is some association of importance is evident, however, by the frequency of cholelithic disease in fat-fed and pregnant animals. Of the two associated factors, pregnancy seems to be the more important. It cannot be overemphasized, however, because of the finding of cholesterosis specimens in the gall-bladders of steers.

MICROSCOPIC FINDINGS

Microscopically, the cholesterosis specimens were identical with those from human cases. The fat droplets were found mainly at the bases of the epithelial cells, equally distributed above and below the nuclei, but closely grouped about them. Advanced lesions were also identical with slides from human cases, for the Sudan-stained lipoid particles were seen in the stroma as well as in the epithelial cells of the gall-bladder wall. One of the most interesting lesions found in the gall-bladder, and limited wholly to pigs, was the accumulation of lymphocytes resembling lymph nodes. Grossly these appeared as large, submucosal swellings, resembling papillomata of the human gall-bladder (Fig. 2). When I first saw these nodules I thought they were papillomata, yet they were relatively flat and sessile, never pedunculated (Fig. 3). They appeared to be possible tubercles, but microscopic sections proved them to be accumulations of lymphocytes, almost typical of lymph-node structure (Fig. 4). They were found in thirty-nine of the 964 pigs' gall-bladders (0.4 per cent). The normal pig's gall-bladder did not contain such areas, and I am unable to account for their significance. The gall-bladders in which they were found were otherwise normal except for one specimen, which contained a single bilirubin-calcium stone. Gauss and Davis reported "papillomatous nodules in the mucosa" of five cattle. No further description of them is given. It would be interesting to know if they resembled the lymphoid structures which I found in the pig's gall-bladder, and which I believed, on gross examination, to be papillomata. No such lesions were seen in the eighty-three cattle examined in my present study.



Fig. 1.—Cholesterosis, grade 2, in a sheep's gall-bladder.

Fig. 2.—Submucosal lymphoid structures in pigs' gall-bladders.

OTHER PATHOLOGY

Acute or subacute cholecystitis, manifested by a reddened, thickened and edematous gall-bladder wall, was found in three of the 964 pigs' gall-bladders, sixteen of the 500 sheep, and one of

the typical picture of acute inflammation with congestion, hemorrhage, edema and lymphocytic or leukocytic infiltration. Chronic cholecystic disease had resulted in the deposition of calcareous material in one gall-bladder in which the wall was

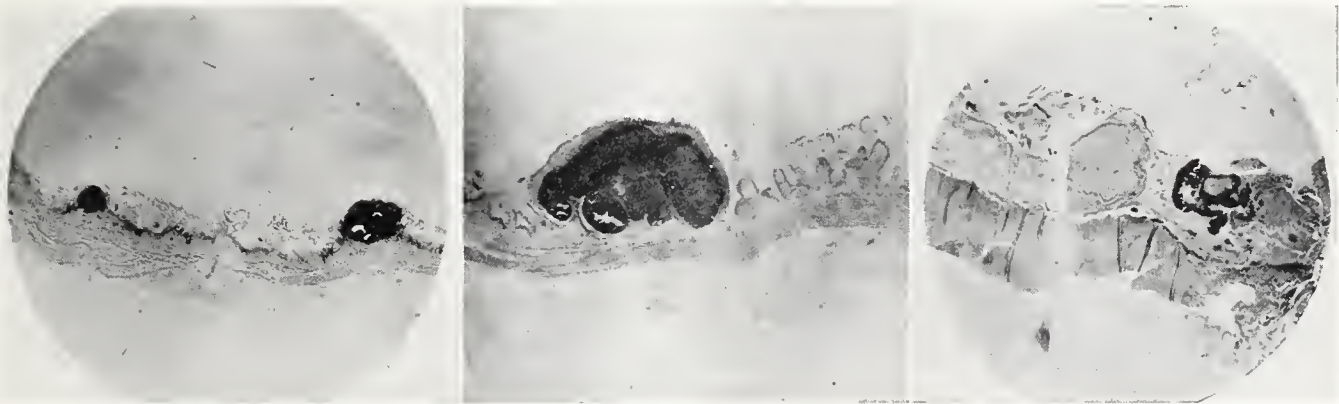


Fig. 3.—The sessile nature of the lymphoid structures is evident.

Fig. 4.—High magnification showing the lymph node structure.

Fig. 5.—Calcareous deposit in chronic cholecystitis (pig's gall-bladder).

the eighty-three cattle. In most instances the acute inflammatory lesion was localized in the fundus or the neck of the gall-bladder, and usually not more than a third of the gall-bladder was involved. Microscopically, the gall-bladder wall presented

greatly thickened and edematous, and showed markedly hypertrophied smooth muscle bundles (Fig. 5). One instance of duplication of the gall-bladder was found in the entire series. This specimen was



Fig. 6.—Double gall-bladder in a pig.

Fig. 7.—Primary adenocarcinoma in a pig's gall-bladder.

Fig. 8.—Stone incrustated polyp from a pig's gall-bladder.



Fig. 9.—Gall-bladder and attached polyp with two cholesterol stones from a sow.



Fig. 10.—Sectioned stone showing polyp nucleus.

recovered from a pig. There were two distinct cystic ducts emptying into the common hepatic duct (Fig. 6). Another pig's gall-bladder showed a true congenital diverticulum. Two small diverticula were found in a cow's gall-bladder in which three large cholesterol stones were also recovered in the series of Gauss and Davis.

A well-localized, pedunculated, cauliflower-like adenocarcinoma was found in a pig's gall-bladder, arising from the ventral third of the gall-bladder wall. There were no stones or other pathology in this specimen. Microscopically the tumor was a typical primary adenocarcinoma of the gall-bladder; apparently growing slowly, and identical with similar specimens from man.

The most interesting specimen in this series was a large benign polyp, about which cholesterol material and bile pigments had precipitated to form a gall-stone (Fig. 8). The pedicle of the stone-encrusted polyp was attached to the gall-bladder wall and was partially coated with stone material. In addition, there were two cholesterol-rich stones, the size of a hazel nut, free in the gall-bladder cavity (Fig. 9). Microscopic sections of the stone show the polyp-like central nucleus with alternate laminations of pigment and cholesterol strata (Fig. 10). This is the best specimen I have seen illustrating the thesis that polyps or papillomata form the nuclei of some gall-stones. I have sectioned many gall-stones in which it has been possible to demonstrate the tissue structure of the nucleus, and I have twice before encountered pigment and cholesterol incrustations on polyps in the human gall-bladder, but this specimen contains the largest polypoid nucleus and the greatest amount of stone material that I have seen.

SUMMARY

1. Gall-stones were found in 0.72 per cent of 964 pigs' gall-bladders, and in 1.75 per cent of four hundred adult sheep's gall-bladders.

2. Only 60 per cent of the stones occurred in the swill-fed hogs, while 40 per cent were recovered from the gall-bladders of grain-fed hogs. However, cholesterol stones came entirely from swill-fed hogs, while bilirubin calcium stones were found in the grain-fed hogs.

3. One cholesterol stone was found in four hundred sheep's gall-bladders, while six cases had bilirubin calcium stones. None of one hundred lambs' gall-bladders had gall-stones.

4. Sex, and particularly pregnancy, were the factors of greatest importance in the incidence of gall-stones in pigs.

5. Cholesterosis was noted in 22.1 per cent of the pigs' gall-bladders and was found equally in the swill-fed and grain-fed hogs. Five instances were discovered among four hundred adult sheep's gall-bladders.

6. Pregnancy seemed to be the most important associated factor in cholesterosis.

7. Large lymph node-like structures were observed in 0.4 per cent of the pigs' gall-bladder walls. They are not normal areas, but their significance is not understood.

8. Acute or subacute cholecystitis occurred in 0.31 per cent of the pigs' gall-bladders—3.2 per cent of the sheep, and 1.2 per cent of the cattle.

9. Duplication of the gall-bladder, congenital diverticulum, primary adenocarcinoma, and incrustation of a benign polyp were incidental, but interesting lesions found in pigs' gall-bladders.

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PNEUMOCONIOSIS—AN OCCUPATIONAL DISEASE*

A STUDY OF FIFTY-EIGHT POTTERY WORKERS

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AND

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DISCUSSION by C. D. Leake, Ph.D., San Francisco; Eugene S. Kilgore, M. D., San Francisco; Robert T. Legge, M.D., Berkeley.

PNEMOCONIOSIS, a fibrosis of the lungs due to repeated inhalation of silica-laden air, has not received from industry or the medical profession the consideration that its frequency and seriousness warrant. An award of total and permanent disability to a worker in the ceramics industry prompted the study here reported.

LITERATURE

Ramazzini¹ first described the grating sound produced by cutting the lung tissues of stone and coal workers in the early eighteenth century. Subsequently, silicosis has been observed in every industry where silica-laden air was encountered.

An acute form of the disease occurs with symptoms manifested as early as three years after initial exposure to mixtures of silica and soap alkalis. Such cases have been described in soap-powder grinders and packers by Chapman² and MacDonald,² in scouring-powder workers by Kilgore,³ in sand-blasters by Foord⁴ and others, and in lens-grinders by Russell.² Death usually is from terminal pneumonia or tuberculosis. A more gradual development of silicosis was found by Clark⁵ in two-thirds of a group of workers in carborundum and carbide, with average occupation period of ten years. Lawson, Jackson, and Gardner⁶ found nine out of seventeen iron miners, with exposure of three to eight years, to have died during the following twenty-one years. The remainder showed rapidly progressing fibrosis. Lanza⁷ reported the average age at death of zinc miners in Missouri as thirty-six years, and the life expectancy of iron-ore workers as nine and six-tenths years. In 1900, Murray reported an asbestos worker who was the only survivor of eleven men entering that industry ten years previously. Asbestos dust enters the lungs as a silicate rather than as the oxid of silica.

Characteristically pneumoconiosis develops insidiously, and the symptoms are latent. Thus, Britton and Head⁸ saw a granite worker and a knife grinder, each with only four months' exposure, who first developed symptoms twenty-three and fourteen years later, respectively.

In a comprehensive review Pancoast and Pendergrass⁹ found fibrosis in 74 per cent of 495 sandstone workers, and in 57 per cent of 208 rock drillers, with average exposure of twenty-one

years. Fifteen per cent of those affected had third-stage silicosis. Fifteen of twenty cement-plant workers, exposed over seven years, had slight fibrosis. Orr⁹ reported second-stage silicosis in a buck-and-wing dancer, who for twenty-five years had scattered sand on the stage before each performance. Mills¹⁰ found advanced fibrosis at autopsy on a man who had worked in an asbestos mine for a short period only, thirty-two years previously. In hard-coal miners with average exposure of eleven years, Tattersall¹¹ found silicosis developing slowly and insidiously. In Welsh coal miners after twenty years' service, Cummins¹² found the lungs to contain large amounts of both rock and coal dust. In his experience silicosis appeared long before tuberculosis developed, and coal miners were not very susceptible to the latter. McFarland,¹³ Russell, et al.,¹⁴ found silicosis to be almost universal in granite workers (as at Barre, Vermont) with an unusual susceptibility to tuberculosis after twenty years' exposure. Head and Rosenblum¹⁵ found 3.7 per cent of five hundred males admitted consecutively to Cook County Tuberculosis Hospital to have tuberculosilicosis.

PATHOGENESIS

The crystalline and amorphous silica compounds (SiO_2) comprising rock-crystal, quartz, quartzite, flint, and sandstone, are the chief producers of silicosis. Lemon and Higgins¹⁶ emphasize the point that more than ten million particles of silica per cubic foot of air, and a size of less than ten microns, are essential to any appreciable silicosis hazard. As high as ninety-two million particles have been determined.

Many observers (Belt,¹⁷ Lemon and Higgins,¹⁶ Russell,¹⁴ Mavrogordato,⁹ Pancoast and Pendergrass,⁹ et al.) believe that, following inhalation, the particles of silica are engulfed by macrophages or "dust cells" which enter and block the lymph spaces. Mavrogordato⁹ concludes that silica kills the "dust cells" and dissolves in the alkaline tissue juices, forming a poisonous hydrosol jell ($\text{Si}(\text{OH})_4$). Gye and Kettle¹⁸ have shown experimentally that colloidal silica, when injected into animals, is poisonous. Fibroblastosis is stimulated and a fibrotic nodule is formed about the dead macrophages. The center of the nodule heals and is free from silica; the periphery grows and abounds in silica particles. Confluence of these nodules produces a massive fibrosis in which are found nests of silica with contiguous healed lesions, some of which show one millimeter or less areas of degeneration. Few believe, with Arntzen,¹⁸ that the physical characteristics (sharp edges) of the silica particles are of much importance.

SYMPTOMS AND DIAGNOSIS

As Russell¹⁴ points out, dyspnea, the earliest and the cardinal symptom, first sets in years after initial exposure, and is progressive for years after exposure ceases. By the time shortness of breath is complained of, fibrosis already is moderately advanced, diminution in expansion and decrease in fremitus and resonance are demonstrable and usu-

* Read before the Industrial Medicine and Surgery Section of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

* From the Golden State Hospital.

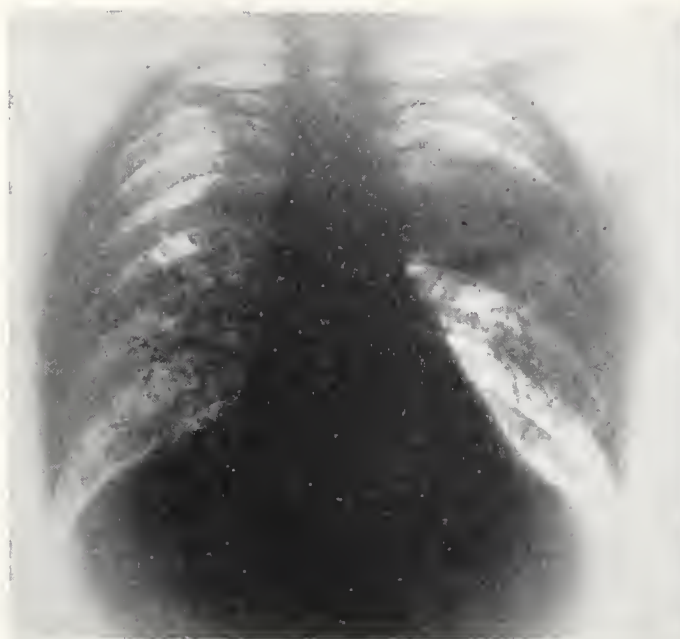


Fig. 1



Fig. 2

Fig. 1, Case 56.—Potter 24 years, marked nodular and massive fibrosis with extensive diaphragmatic pleural adhesions.

Fig. 2, Case 25.—Caster 12 years, marked nodular fibrosis with early massive change in central and basal fields. Note clearness of apices.

ally there is unproductive cough. Later the harsh breath sounds at the bases of the lungs become almost inaudible (Russell¹⁴). Vital capacity is reduced. Cyanosis may be present. The antero-posterior diameter of the chest may be increased an inch. The patient, however, remains well nourished unless tuberculosis complicates the picture.

The earliest roentgenographic findings are increased density of the hilus shadows and trunk branches, perhaps indistinguishable from the changes resulting from repeated respiratory tract infections. A diffuse increase in linear markings follows, and in second stage fibrosis nodulation, most pronounced in the central and basal fields, is observed. Confluence of these nodules produces a picture of consolidation in third-stage fibrosis in which pleural adhesions are almost con-

stant. An important prognostic sign is the fluoroscopic observation of limited excursion of the diaphragm (Pancoast and Pendergrass⁹).

REPORT OF STUDY

In the industrial plant studied, bathroom ware exclusively is manufactured. The clay mixture contains 20 per cent silica, 26 per cent feldspar, 27 per cent English china clay, 10 per cent domestic china clay, 11 per cent English ball clay, and 6 per cent finely ground clay from pitcher or broken ware. The total silica content approximates 20 to 25 per cent.

The casting room constitutes the essential dust hazard. Each caster must shake silica dust into his own moulds, and dry-sandpaper them and brush off the dust from his own moulds. He is thus con-

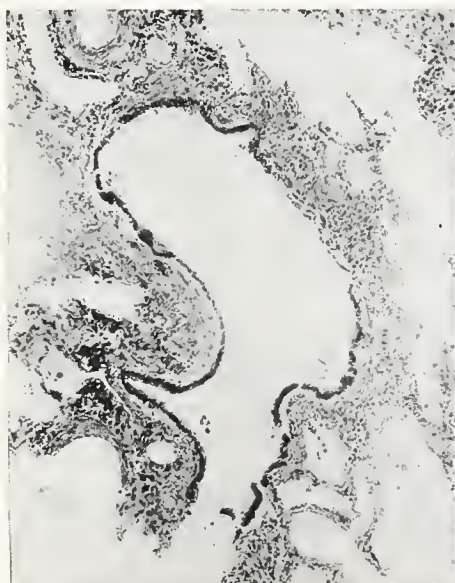


Fig. 3

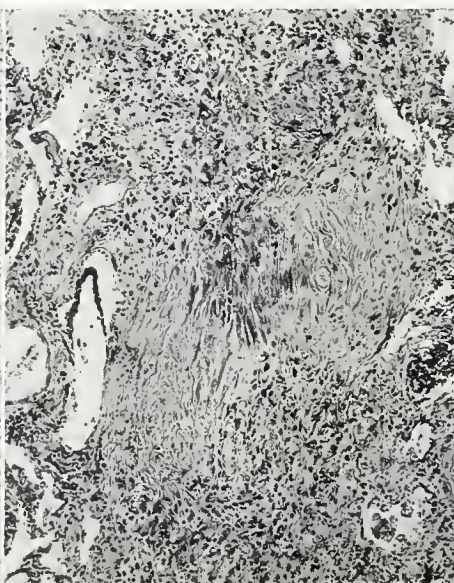


Fig. 4

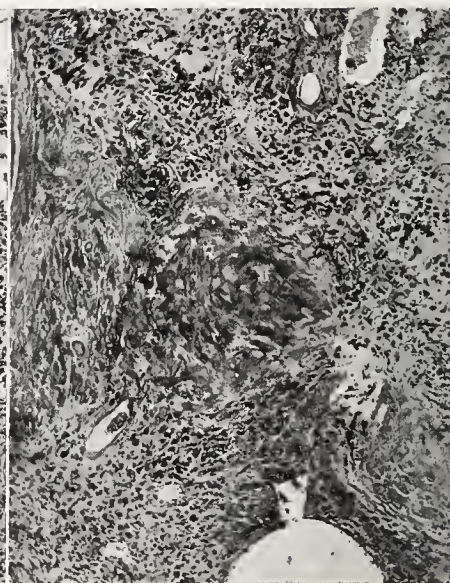


Fig. 5

Fig. 3.—Early peribronchial fibrosis, with siliceous deposits at outer margin.

Fig. 4.—Early nodular fibrosis with many fibroblasts and silica particles at periphery.

Fig. 5. Advanced silicotic nodules with beginning massive fibrosis. Note heavy peripheral siliceous deposits.

TABLE 1.—*Pneumoconiosis (Silicosis). Incidence in fifty-eight of one hundred and six pottery workers, as determined by x-rays of the lungs.*

Stage of Silicosis	Number	Per cent
*Third (markedly advanced, 3; moderately advanced, 2).....	5	8.6
Second (moderate, 22).....	22	38.0
First (slight, 26; hilus only, 5).....	31	53.4
Total.....	58	100.0

* Average duration of exposure was 16 years in advanced group.

stantly inhaling silica dust, and wears no mask. Occasionally the floor is sprinkled with water. There is no forced ventilation system. The fine dust which settles on the moulds while on the drying racks is blown off with a compressed-air hose before the moulds go to the kilns. The dust produced by crushing and regrinding the ware broken during the first firing constitutes an additional silicosis hazard.

One hundred and six employees, exclusive of the office workers, were examined physically. In fifty-eight employees, with an average duration of exposure to silica-laden air of seven and one-half years, x-rays of the chest were taken. As indicated in Table 1, five, or 8.6 per cent, showed third-stage or advanced fibrosis, the average duration of exposure being sixteen years. Twenty-two, or 38 per cent, had second stage or moderate fibrosis. The remaining thirty-one, or 53.4 per cent, showed only slight fibrosis. In five of these latter, the changes were confined principally to the hila.

Pancoast and Pendergrass,⁹ in a study of fifty-eight potters, reported third-stage silicosis in 36 per cent, second-stage silicosis in 48 per cent, and first-stage silicosis in only 16 per cent. The average duration of exposure to dust in their series was not given, hence no accurate comparisons can be made.

REPORT OF CASES

CASE 56.—D. P., age fifty-four years, a potter for twenty-four years, had influenza twelve years before and right basal pleuritis seven years previously. He had complained for five years of progressive shortness of breath and weakness, for one and one-half years of dry cough, and for two weeks of inability to work as a foreman because of "smothering spells" (dyspnea) on the least exertion. He had lost twenty pounds in two years. Expansion of the chest was decreased; resonance was impaired in the interscapular and basal regions, where dry, coarse râles were heard. Breath sounds, harsh throughout, were distant at the bases. Fluoroscopy showed restricted excursion of the diaphragm. X-rays revealed advanced nodular fibrosis with massive confluence in the central and right basal fields.

This patient was awarded total and permanent disability pension by the California Industrial Accident Commission.

1 1 1

CASE 25.—H. G., age forty-three years, a caster for twelve years, had negative history, no symptoms or abnormal physical findings. X-ray examination revealed marked diffuse nodular fibrosis, with early massive confluence in the perihilar and inner basal fields. Death occurred three months later from respiratory failure two days after catching cold at his work. At autopsy were found healed apical (tuberculous) scars; dense, pleural adhesions; streaks of scar

tissue scattered throughout both lungs; several small abscesses in the base of the left upper lobe; and scattered small bronchopneumonic consolidations.

COMPENSABILITY

Pneumoconiosis is regarded universally as an occupational disease. It is recognized as cause for total and permanent disability pension. In California under recent decisions of the Appellate Court, with concurrence of opinion by the Supreme Court, the "date of injury" with respect to operation of the "statute of limitations" is regarded as the time of onset of symptoms, or that time when the presence of silicosis could reasonably have been determined by medical examination of the applicant. Where more than one compensation insurance carrier is concerned, the Industrial Accident Commission has been ordered to apportion the liability for compensation, as the duration of employment or the periods of insurance coverage would indicate as being equitable.

SUMMARY

1. Inhalation of silica-laden air results in pneumoconiosis, a progressive, incurable occupational disease of the lungs.
2. Fifty-eight cases are reported from the pottery industry in which the concentration of dust is low, silicosis develops slowly, symptoms are latent and appear many years after physical and x-ray signs of silicosis are demonstrable.
3. In advanced silicosis, total and permanent disability for work, and a high susceptibility to pneumonia and tuberculosis are being recognized by Industrial Accident Commissions. Tuberculosis was not observed clinically in the group studied; pneumonia terminated one case.
4. Prevention of inhalation and reduction in concentration of silica-laden air should receive more attention from the industries concerned, state legislatures, and the medical profession.

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DISCUSSION

C. D. LEAKE, PH.D., (University of California Medical School, San Francisco).—Doctors Quaintance and Morris deserve much credit for pointing out the industrial accident aspect of chronic inhalation of silica-laden air. The increased use of all types of chemical agents in industry makes it necessary for physicians to determine the possible harmful effects on workmen of chronic contact with any such chemicals. Industry, fortunately, is recognizing more and more its obligation to protect its workmen from dangerous chemicals with which they may come in contact in their daily tasks. It might be wise for commercial concerns to have an investigation made of the toxicity of any chemical agent proposed for use, either in the manufacture of its products, or for distribution for any purpose to the public.

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EUGENE S. KILGORE, M. D. (490 Post Street, San Francisco).—This report deals with a common and long recognized disease. But it is important and timely because pneumoconiosis, despite all that has been written about it, continues very commonly to escape recognition.

It does so for several reasons. The antesympptom period extends over usually several and at times many years, even many years after cessation of exposure to dust; and during this time the physician does not see the patient, or, if he does, he may find no physical signs implicating the lungs. Practically, therefore, medical observation of this stage of the disease is confined to studies of employee groups such as these authors have made. There should be more such studies, and they should receive more attention from employers, insurance carriers and legislators, to the end that workers may be better protected.

Then, when the patient finally appears with his symptoms, it is easy for the physician to be misled. The occupations carrying a silica hazard are numerous, and the patient is now in other employment and forgets to mention the dusty work of years ago. Usually his complaints are not characteristic of the disease, but are simply those of the secondary infection and are not unlike the symptoms of tuberculosis or other pulmonary disease unassociated with silicosis. Some of the patients complain of effort-induced dyspnea, weakness, or chest pain that leads to the mistaken diagnosis of heart disease. One of my acute cases presented a heavy feeling in the chest, which accords well with the liver-like lungs observed in some of the necropsies.

The physical signs are late in appearance and variable, and there are none that are really characteristic of the disease. And even the roentgenograms may be difficult to distinguish from those of other conditions. For the more strictly silicotic markings vary much, not only with the stage to which the disease has advanced, but also with the individual and with the industry in which the silica is acquired. Some of the unusually acute cases have even shown markings resembling those of miliary tuberculosis. And as a rule

by the time the clinical investigation is made, the silica markings are more or less overshadowed by the effects of secondary infection. Practically the diagnosis in most cases depends upon examination, especially x-ray examination, together with an adequate knowledge by the physician of the patient's exposure to silicious dust.

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ROBERT T. LEGGE, M. D. (University of California, Berkeley).—Pneumoconiosis is an incurable disease which is becoming very common, especially among quartz miners, sand blasters, rock drillers and pottery workers, where the dust content is high in a silica-laden atmosphere.

A point that Doctors Quaintance and Morris brought out in their paper on this subject was that the earliest cardinal symptom is dyspnea, *which first sets in years after the initial exposure*, progressing and resulting in decreased chest expansion and vital capacity.

These facts are of the greatest importance to industrial physicians for two reasons: first, in the consideration of compensations, and second, in the establishment of preventive measures.

First: From a medico-legal standpoint and to obviate the possibility of the "racket" that certain lawyers, and even certain physicians, are guilty of at times in encouraging the institution of suits against employers, it is important to the plaintiff of these suits that the facts be well understood. The question of whether the disease is common in the industry where the worker is employed or whether he was exposed previously in other plants to silica dust, and the length of interval between that exposure and the present disability is most important, that is, to ascertain whether the interval was of sufficient length for the development of the disease. Ordinarily the first-stage symptoms of silicosis develops in from two to ten years after exposure, depending upon the number of millions of particles of silica dust of less than ten microns in size that were disseminated in the air. To determine this content dust counts and measurements must be conducted.

To establish the condition of silicosis in the worker it must be shown that he worked in proximity to the source of dust, and that the machines were not properly safeguarded by exhausts.

Second: Prevention. Once any stage of silicosis is present, it becomes an incurable malady and tuberculosis is frequently superimposed. Any employer of labor in a dusty trade where silicon dust is disseminated in the atmosphere should require of each worker a complete history of his former occupation and the time involved, and also a complete recorded physical and roentgen examination by a competent physician. He should reject all mouth breathers and persons suffering from preëxisting pulmonary diseases. These records must be rechecked annually for comparison. Any person found with early dyspnea must be relieved from the dusty environment and given a different occupation. Employers must provide supervised mechanical ventilation, wet processes, respirators, and other measures to protect the workers.

At the present time in the pottery industry apparently there has not been discovered a satisfactory substitute for flint for bedding purposes. It is to be hoped that a new process will be developed which will lessen the incidence of this incurable affliction.

✽

DOCTOR QUAINANCE (Closing).—As the discussers, whom I wish to thank, again have emphasized, the insidious development, the paucity of physical signs, and the similarity of symptoms of silicosis to those of other respiratory affections make important more general use of painstaking employment examinations, particularly utilizing fluoroscopy and x-rays, and the adoption of available preventive measures in the dusty trades. These measures are imperative if the incidence of silicosis is to be reduced. The problem is one of coöperation between industry and the medical profession.

TRAUMATIC RUPTURE OF THE KIDNEY*

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DISCUSSION by Charles Pierre Mathé, M. D., San Francisco; Edward W. Beach, M. D., Sacramento; Clark M. Johnson, M. D., San Francisco.

THIS paper is based on the review of forty-two cases of traumatic rupture of the kidney that have been treated on the urological service of the Los Angeles County General Hospital since 1929. These clinical records include all cases of hematuria of traumatic origin that possessed two or more of the so-called classical symptoms (hematuria, pain, muscular rigidity, tumor, and ecchymosis), referable to the kidney area. There were fourteen cases in which a presumptive diagnosis was made from the symptoms, and twenty-eight cases in which a positive diagnosis was made either by cystoscopy, ureteral catheterization, retrograde pyelography, intravenous urography, or autopsy findings.

It is not the purpose of this paper to discuss the literature, which is far too voluminous to be adequately covered in such a communication, nor to dwell on individual case histories, nor to boast of or excuse mortality statistics which, as a matter of fact, conform closely to many others which have been published, with reference to etiology, theories of cause for rupture of the kidney, symptoms, complications, pathology, and end-results.

There are, however, several salient factors of clinical importance with reference to symptoms, diagnosis, treatment, complications, and results that I wish to emphasize appropriately as I analyze these aforementioned topics, since they are a necessary part of the clinical picture presented by these types of cases.

ETIOLOGY

The oldest patient was 64 and the youngest three years. The average was 25.6 years. There were thirty-eight males and four females. Twenty cases involved the right side, and twenty-two the left side.

Nature of the Injuries.—The injury to the kidney was often variable and disproportionate to violence:

1. Direct force.
- Sudden severe external trauma to the loin, over the kidney, and falls, striking upon the back or abdomen; crushing force, as when run down by, or in overturned, automobiles (twenty-eight cases).
2. Indirect force.
- Falls of the body landing upon the head, feet, buttocks, that is, without direct trauma over the kidney area (three cases):

(a) A child, aged 8, fell while playing and fractured a rib and suffered a contusion of the kidney.

*From the Urological Service, Los Angeles County General Hospital.
*Read before the Urology Section of the California Medical Association at the sixty-second annual session, Del Monte, April 24-27, 1933.

(b) A man fell six feet, struck on his buttocks. A urologic study disclosed a rupture of the lower pole of the kidney.

(c) A woman, while intoxicated, jumped out of a second-story window and fractured the rami of the pelvis. The injury to the kidney was a contusion.

3. Kicks or blows over the kidney.
- (a) Three cases attributed their injuries of the kidney to kicks over the loin while playing football.
- (b) Blows over the kidney (two cases): one was struck over the kidney while boxing, and the other was struck in the loin by the elbow of a team mate while playing football.

4. Penetrating or puncture wounds.
- There were three gunshot and two stab wounds.
5. Sudden muscular contraction.

A school boy, aged 13, jumped over the fence and ruptured the upper pole of a hydronephrotic kidney.

PATHOLOGY

In this series of cases all of the discernible tears were transverse to the long axis of the kidney. There were, apparently, thirteen intracapsular contusions or tears, nineteen intracapsular, five multiple (pulpification), four tears extending into the vascular pedicle, and two patients that had coexisting renal disease. The extent of

TABLE 1.—Outlining Nature of the Injuries

1. Location of the injuries:	
Intracapsular injuries.....	13
Transcapsular injuries.....	19
Co-existing renal disease	2
Location not stated	8
2. Location of the single tears:	
Lower pole	10
Upper pole	3
Middle portion	4
3. Location of the multiple tears:	
(Pulpification)	5
4. Tears involving pelvis	6
Tears involving ureter	0
Tears involving pedicle	4
Tears involving peritoneum	1

the injury did not depend upon the trauma producing it, nor upon the manner in which it was applied. The ruptures extended to varied depths into the kidney tissue, sometimes on the anterior and again only on the posterior surface. The edges of the rupture were frequently stellate, and it was usual to find one extremity, an upper or lower pole, ruptured or torn free from the kidney; or the kidney may be bisected, trisected, or pulpified. The tears showed a tendency to follow the embryologic lines of development of the kidney.

SYMPTOMS

The symptoms of traumatic rupture of the kidney are shock, pain in the region of the kidney, tenderness over the costovertebral angle, muscular rigidity, hematuria, and abnormal mass in the loin, and ecchymosis. The symptoms were significant, but variable and inconstant.

1. Shock was present in eighteen, and absent in twenty-four cases; when present it was mild, severe, transitory, or delayed.
2. Pain was present in thirty-seven cases. It was limited to the loin on the injured side (twelve

cases); limited to the loin and abdomen on the injured side (twenty-five cases); and to the loin, abdomen, and chest (five cases). It usually subsided after a few days.

3. Tenderness in the costovertebral angle was present in all patients who complained of pain.

4. Muscular rigidity was present in the loin of the injured side in every case, and over the corresponding side of the abdomen (twenty cases); and it was general over the abdomen (ten cases). Often it was more marked in the upper quadrant of the injured side (twelve cases), or in the lower quadrant (eight cases).

5. Hematuria was present in thirty-nine cases, undetermined in one moribund case, and absent in two cases. It was delayed in three, intermittent in eight, transitory in seven, and found by microscopic examination in two cases. Three cases had retention of urine, and catheterizations revealed bloody urines which contained clots.

6. An abnormal retroperitoneal mass of variable size was present in nineteen, absent in seventeen cases, and undetermined in six.

7. Severe bruises, discoloration and ecchymosis (showing evidence of external violence), in the loin over the kidney injury, were present in seventeen, absent in nineteen, and not recorded in six cases.

There was no apparent relationship between the severity of the symptoms (aside from the shock and evidence of the loss of large quantities of blood) and the amount of injury to the kidney. Although constant, frequent coexisting injuries obviated pain and muscular rigidity as characteristic symptoms. All other symptoms, including hematuria, were variable, inconstant, or confusing, and did not justify more than a presumptive diagnosis. Obviously, a urologic study is required to make a positive diagnosis of traumatic rupture of the kidney.

DIAGNOSIS

An immediate and as definite a diagnosis as it is possible should be made concerning the injury to the kidney, and whether there exists complicating injuries; and as much information as is possible should be obtained regarding the uninjured kidney.

In this series the most effective diagnostic procedures were, viz.:

1. A kidney, ureter, and bladder x-ray picture was done in thirty-six cases. It gave only suggestive evidence of a kidney injury in five cases, but added much valuable information in regard to fractures and coexisting renal disease.

2. Observation cystoscopy was done in twenty cases, and furnished diagnostic information in all but two cases in which hematuria was absent.

3. Catheterization of the ureters was done in fourteen cases (eleven times on the injured side, and four times on the opposite side) to rule out renal pathology, and eight times on both sides for urologic study.

4. Retrograde pyelograms were done ten times, and showed definite silhouette of the opaque media into the perirenal tissues in six cases.

5. Intravenous pyelography was attempted in fifteen cases. It furnished diagnostic information, viz.:

(a) Satisfactory pyelograms for diagnostic purposes were obtained in two cases (13 per cent).

(b) Valuable information regarding the uninjured kidney was obtained in eleven cases (73 per cent).

(c) In nine cases there was a negative shadow on the injured, and a positive shadow on the uninjured side (60.3 per cent). The examination was repeated in several cases, and the negative shadow on the side of the injury was found to be persistent until the kidney was well on its way to recovery.

(d) In four cases, in severe shock, there were bilateral, indefinite negative shadows (26.6 per cent). In two of these cases, after shock had been obviated by blood transfusions and supportive treatment, intravenous urography revealed positive shadows on the uninjured, and negative shadows on the injured side.

(6) Indigo-carmin was used, intravenously, in nine cases. The appearance and concentration was normal from the uninjured side in all cases, but it showed variable delayed appearance and concentration on the injured side in seven cases.

In no instance did ureteral catheterization have a detrimental effect (aggravation of hemorrhage, or infection), as is stated in several textbooks. On the contrary, ureteral catheterization and pyelographic study aided to rule out two pathologic kidneys that had given a history of injury and complained of hematuria. An inlying catheter on the injured side (changed four times) enabled Doctor Day to treat expectantly and successfully a rupture of the lower pole of the kidney that showed definite extravasation of the opaque media, and had an abnormal mass in the loin of the injured side; complicated by a fracture of the seventh cervical vertebra, and a fracture of the femur. Incidentally, the same surgeon catheterized and treated with an inlying ureteral catheter, on the injured side, an apparent pyelonephritis (five times) in a male child three years old. Later this child developed a perinephritic abscess that was drained. The postoperative convalescence was uneventful. Subsequent follow-up notes indicated that there was no further trouble in the urinary tract.

Intravenous urography is to be recommended as the most applicable and safest diagnostic procedure available for the study of kidney injury. It is informative when properly interpreted, and when used under favorable circumstances. A frequent negative shadow on the side of the injury is diagnostic evidence, but does not furnish pathologic information. Although infrequent, a positive shadow furnishes adequate diagnostic information.

It is apparent that:

1. The injury to the kidney causes a partial or complete temporary anuria.

2. After kidney injury, edema impairs function sufficiently to lower the concentration below the amount necessary for a skiagraph.

3. The bilateral negative shadows, in the cases of severe shock, are due to lowered volume of blood in the kidney on account of the fall in blood pressure.

COMPLICATIONS

Serious complications were present in twenty-eight, and absent in fourteen cases. Their prevalence and wide distribution stresses the importance of complete examinations that include adequate differential roentgen-ray pictures for their detection. Immediate and appropriate treatment of the complicating injuries, in accordance with the principles and practice of surgery, are a necessity, for in many instances they are far more serious and add shock, infection, and mortality. (Two-thirds of the mortality in this series of cases was a result of the complicating injuries, and not the traumatic rupture of the kidney.) It should be remembered that complicating injuries of the brain, abdominal viscera, and chest may be latent in manifesting themselves.

The most frequent complications were fractures (twenty—multiple, sixteen; single, four). They were as indicated in Tables 2 and 3.

TREATMENT

The treatment of each patient presents an individual problem that necessitates judgment and experience. A careful analysis of the patient's general condition is a prerequisite whether the treatment selected is expectant or surgical. Severe shock or hemorrhage are manifested by a rapid, feeble pulse, low blood pressure, low red cell count, and low hemoglobin. In this series of cases a persistent low systolic blood pressure (less than 100), a red cell count under 4,000,000, or a hemoglobin under 60, called for an immediate blood transfusion and supportive treatment with intravenous and subcutaneous fluids. Eight cases had one blood transfusion and two cases had two transfusions; in all favorable cases this obviated shock and improved the patient's general condition noticeably. Three of the surgical patients died from complicating injuries.

The white cell count was exceedingly high (lowest 8,400, highest 26,000, average 17,600), and accompanied by a corresponding high polymorphonuclear count, average 87.2 per cent. Two other fatal cases had white cell counts of 2,760 and 3,600, with no increase in the polymorphonuclear count, which should not be mistaken for signs of intra-abdominal bleeding or infection.

TABLE 2.—Kinds of Complicating Injuries

A. Fractures:	
Skull (basal)	1
Bones of face	1
Seventh cervical vertebra	1
Dorsal vertebra	1
Transverse processes of lumbar	3
Sacrum	1
Ribs	10
Bony pelvis	3
Arm	4
Leg	3
Femur	1
B. Dislocations:	
Hip	1
C. Injury to viscera:	
Various visceral injuries	16

TABLE 3.—Other Complicating Injuries

Rupture of esophagus	1
Rupture of duodenum	1
Rupture of liver	3
Gunshot wounds	2
Rupture	1
Gunshot wounds of stomach	1
Gunshot wound of pancreas	1
Peritoneal tears—G. S. W.	1
Subdiaphragmatic pleurisy	1
(Traumatic origin)	
Hemothorax	2
Pneumothorax	3
Vascular	1
Rupture of the lung	1

EXPECTANT TREATMENT

Expectant treatment with repeated blood pressure readings and hemoglobin determinations, every one or two hours, are the safest guides to the progress of the case, and the most definite indications for surgical intervention.

Thirty-one patients were treated expectantly. The convalescence was uneventful in twenty-three, septic in six, and two died from shock and hemorrhage, one as the result of a ruptured duodenum and mesenteric artery, and the other from rupture of the lung, bisection of the kidney, and fracture of all of the right ribs. The cases that had a septic temperature were treated expectantly, because complicating injuries made it necessary to modify the treatment.

Recurrent hemorrhage or infection were the indications for abandoning the expectant for surgical treatment in four cases; and each case had an uneventful postoperative convalescence. The average hospital stay was twenty and eight-tenths days for the expectant cases. The mortality was 3.3 per cent.

CONSERVATIVE SURGERY

Surgical intervention is indicated whenever there is evidence of primary or secondary uncontrollable hemorrhage, sepsis, or urinary extravasation into the retroperitoneal tissues. The surgery should be as conservative as is consistent with the exigencies of the case; and it should not be done too soon nor too late.

Conservative surgery was done on six cases:

1. One case had evacuation of clots, and a tear in the lower pole of the kidney was closed with mattress sutures. The convalescence was uneventful and the patient left the hospital in sixteen days.
2. One patient, admitted eleven and one-half hours after an automobile accident, was comatose, the blood pressure was 98/72, temperature 100, pulse 160, respiration 32, the red cell count 3,240,000, and hemoglobin 56. After a blood transfusion the temperature was 100, pulse 120, respiration 22, and the blood pressure 118/74. Surgery was indicated for severe and uncontrollable hemorrhage. At operation a huge hematoma extending from the diaphragm to the pelvis was evacuated. The lower pole of the kidney was found to be completely severed and there was active arterial bleeding from the region of the pelvis. The bleeding was arrested by ligation, and the lower pole was approximated to the kidney

with mattress sutures. The patient died on the operating table.

3. One patient who was treated expectantly for thirty days developed an abscess in the lower pole of the kidney that was excised, and the cut edges approximated with mattress sutures. The convalescence was uneventful and the patient left the hospital in forty days.

4. One child, aged three, was treated expectantly for kidney injury. He developed a perinephritic abscess that necessitated drainage, and a rent in the lower pole of the kidney was verified at operation. The symptoms were masked in this case by the development of an acute pyelonephritis in the injured kidney that required five ureteral catheterizations for treatment, and the chicken-pox which obviated adequate treatment while the child was isolated. He recovered after ninety days' hospitalization. The follow-up notes disclose no urinary trouble, nor discomfort in the area of the injured kidney or bacteriuria.

5. One case with rupture of the lower pole of the kidney had an exploratory laparotomy in general surgery. His complaint on admission contained three of the classical symptoms of traumatic rupture of the kidney, in addition to gross hematuria, that was persistent and continuous for thirty days. In this period the patient had two urologic consultations, but no cystoscopy or urography. After sixty days the patient became septic, a retrograde pyelogram revealed diffuse extravasation of the media into an infected hematoma in the region of the lower pole of the kidney. At operation, in addition to an infected hematoma, an area of necrosis around a tear in the lower pole of the kidney was excised. A nephrotomy tube was placed in the kidney pelvis and the hemorrhage controlled with mattress sutures. The postoperative convalescence was uneventful, and the patient left the hospital in twenty-two days.

6. Treated expectantly for three days, but the tumor in the loin increased in size and the patient developed a septic temperature. Operation: Incision, evacuation of clots, drainage for extravasation of urine and packs to tear in the lower pole of kidney for control of hemorrhage. Convalescence uneventful and the patient left the hospital after sixteen days.

RADICAL SURGERY

Nephrectomy was done on five cases:

1. Rupture of the upper pole of the kidney with congenital hydronephrosis in a child, aged thirteen, had evidence of severe and uncontrollable bleeding; sepsis, and large abnormal mass in the loin. Transfusion. Nephrectomy. Convalescence uneventful.

2. Stab wound, involving the upper pole of the kidney. Explored in private hospital four days previous to admission. Had three severe recurrent hemorrhages. Nephrectomy for severe and uncontrollable hemorrhage. There was marked necrosis in the wound in the kidney that involved most of the upper pole. Convalescence uneventful, and the patient left the hospital in thirty-two days.

3. The patient was treated expectantly for thirty days because of complicating injuries, but developed severe and recurrent hemorrhage and septic temperature. At operation an infected hematoma, urinary extravasation, and marked necrosis involving the lower pole of the kidney necessitated a nephrectomy.

4. A case of pulpification of the kidney required a nephrectomy for uncontrollable hemorrhage. The patient developed a septic postoperative temperature, suppurative cervical adenitis, and a peritonsillar abscess, and died after twenty-two days. At autopsy a rupture of the esophagus and a mediastinal abscess was discovered to be the cause of death. The nephrectomy wound had healed.

5. Admitted from an outside hospital with history of multiple fractures, exploratory laparotomy, incision and drainage of loin for evacuation of a hematoma and urinary extravasation. Had a urinary sinus that closed after three months, but developed pain in the right loin and right upper quadrant after two months, and a hematuria for the past three days. Urologic study revealed an occlusion of the ureter, on the injured side, 25 centimeters from the orifice. The opposite kidney was normal. At operation a marked fibrosis of the perirenal tissues made it impossible to dissect out the pedicle. An extracapsular nephrectomy was done by placing the clamps across the pelvis and ligating with a suture ligature after the technique of MacGowan and Parker. The ureter was apparently intact, but had been occluded by fibrosis and perinephritis.

RESULTS

There was a total of ten deaths in this series of forty-two cases (23.8 per cent). In but four cases should the cause of death be attributed to traumatic rupture of the kidney (9.5 per cent).

A. Cause of Death—Rupture of the Kidney.

1. A case of pulpification of the kidney was moribund on admission, because of exsanguination, and the patient died before he could be treated.

2. One patient was treated expectantly on account of suspected complications; died from shock and hemorrhage, which the autopsy revealed to be due to rupture of the kidney.

3. One patient, comatose, exsanguinated and in extreme shock, was found to have a complete severance of the lower pole of the kidney at operation. Died on the operating table.

4. The patient was exsanguinated and in severe shock on admission. He did not respond to a blood transfusion and active supportive treatment. He died in seven and one-half hours from shock and hemorrhage. The autopsy findings were a fracture of all of the right ribs, rupture of the lung, hemothorax (500 cubic centimeters), a large retroperitoneal hematoma, bisection of the kidney, and a tear involving the vascular pedicle.

B. Cause of Death—Complicating Injuries.

1. Rupture of the kidney was treated expectantly. The cause of death, as reported by the coroner, was due to shock and hemorrhage follow-

rupture of the duodenum, mesenteric artery, and fracture of the rami of the pelvis.

2. Pulpification of the kidney; patient died twenty-three days after nephrectomy. Cause of death: rupture of the esophagus and mediastinal abscess.

3. Rupture of the liver and pulpification of the kidney. Patient dying when admitted.

4. Pulpification of the kidney and basal skull fracture. Dying when admitted.

5. One case diagnosed as rupture of the lower pole of the kidney and suspected internal injuries. Not treated. Transferred to a private hospital, and died of peritonitis.

6. Gunshot wound of the stomach, pancreas, pulpification of the upper pole of the kidney. Laparotomy was done for repair of intra-abdominal injuries. The kidney condition was treated expectantly. The patient died of peritonitis.

1930 Wilshire Boulevard.

DISCUSSION

CHARLES PIERRE MATHÉ, M. D. (450 Sutter Street, San Francisco).—We are indebted to Doctor Schenck for his timely contribution on traumatic rupture of the kidney, in which he emphasizes salient points that enhance its diagnosis and its successful treatment. He points out that difficulty of diagnosis is often due to obscurity of symptoms. Hematuria has been considered as pathognomonic of rupture of the kidney; yet this cardinal sign is variable and is likely to be absent, particularly if the tear does not involve the kidney pelvis, collecting tubules or calices. Rupture of the parenchyma usually results in extravasation of blood into the renal loge, which is either confined within the limits of the perirenal fascia, giving rise to more or less grave symptoms, or finds its way into the renal pelvis or peritoneal cavity, resulting in rapid death by exsanguination. Rupture of the pelvis, one of the major calices or ureter, is followed by extravasation of urine into the renal fossa; this invariably results in the formation of an abscess which may be limited within the confines of the renal fossa, or may perforate into the peritoneal cavity or lung, causing grave symptoms and sometimes death. In many cases an accurate diagnosis can only be made by a complete urologic study, consisting of ureteral catheterization, urography, including retrograde and intravenous pyelography, or functional kidney studies, etc. I am glad to see that the essayist does not hesitate to investigate the case of the patient in whom the diagnosis of ruptured kidney is doubtful, and states that which all progressive urologists should assume, namely, that ureteral catheterization does not aggravate hemorrhage nor favor infection. In some instances, the ureteral catheter permits one to drain the pelvis and relieve hematuria due to minor ruptures of the pelvis or parenchyma.

I wish to point out the fact that a kidney which has been weakened by stone formation, hydronephrosis, chronic nephritis, pyelonephritis, tuberculosis, abscess formation, tumor, infarct or aneurism, is more readily ruptured than the healthy organ. The slightest blow may cause rupture of the weakened diseased organ. These sometimes rupture spontaneously, and recently I reported six such cases.

There is no question that a goodly number of ruptured kidneys heal without causing subsequent trouble or resulting in permanent damage to this organ. In others, extravasation of urine and blood in the perirenal tissues is followed by resolution, resulting in perinephritis with fibrosis of the perirenal fat, which may involve and compress the ureter, and so cause obstruction and hydronephrosis. In others, rupture of a calyx may result in cystic dilatation of the kidney, the calyx becoming walled off and losing its communication with the renal pelvis—a condition which is

known as pseudohydronephrosis. Still more rarely, renal contusion results in the formation of aneurism of the renal artery or stone, the calculus being formed around a nucleus made up of a retained blood-clot.

The treatment outlined by Doctor Schenck is rational, and calls for keen judgment and experience. The choice between expectant treatment, conservative surgical measures and nephrectomy should be based on the findings of each individual case. In the late case of extensive injury complicated by infection, it might be well to do a two-stage operation, consisting of primary incision, and arrest of hemorrhage and drainage; and when the patient's strength has been restored, to follow this by a secondary nephrectomy.

✱

EDWARD W. BEACH, M. D. (Medico-Dental Building, Sacramento).—In my opinion, the most exacting modern Aristarchus, after the example of his illustrious predecessor, must employ numerous asterisks and very few obelisks in adjudging Doctor Schenck's instructive essay.

This article is concise, yet comprehensive, in its review of these forty-two cases of kidney injuries, occurring at the Los Angeles General Hospital since 1929. Certain aphorisms may be adduced after careful consideration of this paper. First, those concerning the occurrence of kidney injury; second, those concerning diagnosis; and third, those concerning its treatment.

Kidney injury is much commoner than is usually supposed in these days of high-speed life and transportation. It varies in extent and degree, not always proportionate to the exciting factor nor to the force applied. Apparently it respects no age limits, but is seen more often in the male during his prime years. And preëxisting kidney pathology courts injury.

Accurate diagnosis is always a prerequisite to satisfactory management, but is always secondary to the general condition of the patient. Doctor Schenck rightly directs attention to the shortcomings of intravenous urography when employed in these traumatic kidney injuries, the very group most tempting for skiodan. Absence of any shadow, disappointments, and erroneous conclusions are all too frequent a reward for one's efforts in this field. Since the average urologist possesses neither the perception of Zadiq nor the ivory tube of Prince Ali, I feel that, whenever possible, a retrograde pyelogram in this type of case is obligatory. By this means alone is one sure to obtain a definite and concrete portrait of the location, extent and position of the injury. In skilled hands, with the use of the manometer, the danger is slight, and the knowledge gleaned therefrom more than compensates for the risk. Extravasated pyelographic media are seldom provocative of difficulties and are quickly absorbed. Only this method affords positive and scientific evidence, and it therefore takes precedence over any and all presumptive signs.

Treatment must always take cognizance of shock and concomitant injuries. Rarely does hematuria cause death, unless the pedicle is torn or the kidney pulpified; and then shock often closes the picture before the surgery is reached. With accurate knowledge of the injury, expectant conservatism is usually the best policy. If the bleeding persists, if the mass in the loin increases, if urinary extravasation is suspected because of a tear through a salyx, or if there is an obstruction below in the ureter, then surgical intervention is justifiable and necessary.

Through the efforts of urologists, the attention of the general surgeon has been directed toward kidney possibilities in all accident cases; and today the surgeon is alert and watchful for this pathologic entity. Moreover, because of the urologist's studies, he knows how to cope with this accident when it is encountered.

✱

CLARK M. JOHNSON, M. D. (384 Post Street, San Francisco).—Doctor Schenck has presented an unusually large and carefully studied group of patients with rupture of the kidney.

It is apparent that there are two general groups of cases: (1) Those complicated by other injuries. (2) Those with only renal injury. In the first group of complicated injuries, there are two main types—(a) bone, and (b) visceral injuries.

The bone injuries are usually evident and offer no great difficulty in differential diagnosis. The second group with complicating visceral injuries taxes the combined judgment and skill of the emergency surgeon and the urologist. I refer particularly to injury of the liver and spleen. In a much smaller series of cases at the San Francisco General Hospital, of ten cases of renal rupture with complicating injuries there were three ruptured spleens and one ruptured liver, with rupture of the left and right kidney, respectively. In this group, also, should be included cases of intraperitoneal rupture which are rare and equally rarely successfully diagnosed. The speaker has pointed out the methods and difficulties of diagnosis. The conclusions for this group of cases are only these: In cases of injury with abdominal signs and symptoms plus shock and hemorrhage, abdominal exploration and exploration of the renal fossae are mandatory. Prompt surgery and multiple transfusions are our only hope in such cases.

In the second group, where the kidney only is involved, there is one important question: whether to intervene surgically or to treat the patient expectantly. Only from such large series of cases and personal experience can we answer the question in general, for each case presents its individual problem. I should like to know Doctor Schenck's reaction to the hypothesis that more radical surgery or, perhaps more aptly, earlier surgery, may result in greater conservation of renal tissue with no increase in loss of life. To be more specific, too long delayed surgery in evident rupture may result in irreparable infection and necessitate nephrectomy, while comparatively early surgery, after the period of shock is past, should decrease our mortality and our nephrectomies.

VENEREAL DISEASES IN SAN FRANCISCO*

A SURVEY

By TALIAFERRO CLARK, M. D.

AND

LIDA J. USILTON †

Washington, D. C.

DISCUSSION by J. C. Geiger, M. D., San Francisco; Robert V. Day, M. D., Los Angeles; H. J. Templeton, M. D., Oakland.

INTRODUCTION

A ONE-DAY census of cases of venereal disease, under observation or treatment by any authorized source in San Francisco, was made at the invitation of the city and state health authorities by the United States Public Health Service in coöperation with the American Social Hygiene Association. It is an integral part of a complete survey of the medical aspects of social hygiene in San Francisco. This city was selected as representative of conditions in the Pacific Coast region, in a series of prevalence surveys which have been made in various localities throughout the United States, including not only large metropolitan cities,

such as New York City, Cleveland, Detroit, Baltimore, and New Orleans, but also extending from hamlets to entire states. In fact, the prevalence surveys to date include the sources of treatment charged with the maintenance of the health of 20 per cent of the population of the United States.

PURPOSE

The experience gained throughout the communities in which these one-day census surveys have been conducted has emphasized the soundness of making this particular type of survey the primary step in the planning of an effective campaign for the control of venereal diseases. Until the inauguration of the one-day census in the field of venereal diseases, most indices of the infected population showed so wide a range as to render them unreliable. However, there has been such a marked similarity in the rates established through these surveys that, if given the treatment facilities—the social and economic status of a community, with the general census data of age, sex and race distribution—it is possible to foretell with a fair degree of accuracy the probable prevalence rate for venereal diseases in a particular community. Using this rate of the spread of the venereal diseases in the general population as a base, the effects and duration of these diseases could be converted into more definite statements, and would form the base line from which to determine the trend of the venereal diseases in the future.

While the results of the present survey are entirely comparable with those of the surveys previously made, San Francisco does have one feature which is not common to any of the other communities, and that is the size of its Chinese, Japanese, and Mexican population. Here is found the largest Chinese center in the United States, with a death rate that is almost three times as high as that among all the other races. An effort will be made to analyze the extent to which syphilis plays a part in this high death rate.

METHODS OF SURVEY AND DEFINITIONS OF TERMS USED

A one-day census of venereal disease is made by reaching all treatment sources authorized to care for the sick, and requesting data as to the number of persons under treatment or observation for a venereal disease on any one day; the date of the present survey having been August 1, 1931. These data are indicated by sex and race of the patient, and by the stage of the disease at which the patient reported for treatment. The rate based on these data is known as the prevalence rate per 1,000 population for the given community. In addition to these data, information was sought as to the number of cases reporting for treatment of the present infection to any source for the first time. The rate thus established is known throughout this report as the incidence of the disease, *i. e.*, the number of first-time admissions for the treatment of the present infection.

In the interest of uniformity of reporting, and realizing that in some instances exact information

* A report on the survey of venereal diseases in San Francisco made by the United States Bureau of Public Health Service in coöperation with the Health Department of the City and County of San Francisco and with the approval of the California State Board of Health and the American Social Hygiene Association. Report made by Taliaferro Clark, Assistant Surgeon General, and Lida J. Usilton, Associate Statistician, U. S. Public Health Service.

† The entire field work involved in securing a one hundred per cent return of questionnaires in San Francisco was done by Samuel M. Auerbach of the American Social Hygiene Association.

TABLE 1.—Source of Reports and the Number of Cases of Venereal Disease Under Treatment or Observation in San Francisco, California, on August 1, 1931						
Source of Reports	Total Number of Reports	Number Reporting No Cases	Number Reporting One or More Cases	Per Cent Reporting One or More Cases	Total Number of Cases Reported	Percentage of Cases Reported by Each Source
Total	1,649	1,081	568	34.4	7,105	100.0
Physicians	1,374	859	515	37.5	4,321	60.8
Other private practitioners	176	161	15	8.5	71	1.0
Clinics	31	10	21	67.7	2,398	33.7
Hospitals	37	25	12	32.4	225	3.2
Institutions	31	26	5	16.1	90	1.3

would be difficult to obtain, the stage of infection on seeking treatment was defined as “early” syphilis for the cases in which not more than one year had elapsed since the date of infection; “late” syphilis, for all cases in which more than one year had elapsed since the date of infection; for gonorrhea, “acute” cases are those in which less than three months had elapsed since the date of infection, and “chronic” for those cases in which more than three months had elapsed since the date of infection. Throughout the survey, the groups have been divided so as to show the whites separately from the other races. In San Francisco the majority of the “others” includes Chinese, Japanese, and Mexicans, there being comparatively few negroes.‡

DISTRIBUTION OF PATIENTS BY TREATMENT SOURCES

There were 1,649 sources of treatment in San Francisco, all of which reported, making a 100 per cent return of questionnaires. Eighty-three per cent were physicians, 38 per cent of whom had one or more cases under treatment. In Table 1 it will be noted that, in addition to the 1,374 physicians, there were also 176 other practitioners, including osteopaths, naturopaths, chiropractors and other drugless practitioners, 8.5 per cent of whom reported one or more cases under treatment; in fact, these practitioners had one per cent of the total number of cases reported. The public clinics had under treatment 34 per cent of the total cases. Approximately two-thirds of the physicians did

‡ San Francisco is, according to the 1930 Census, a city of 634,394 people, of whom 47 per cent are male and 53 per cent female. Of the total number, 70 per cent are native white people, 24 per cent are foreign-born white, and 0.6 per cent are negro. The remaining 5.6 per cent are of “other races,” including 2.6 per cent (16,303) Chinese, one per cent (6,250) Japanese, and 1.2 per cent (7,922) Mexicans.

not treat, or at least did not report having under treatment, any cases of venereal disease at the time of the census. The fact that 8 per cent of the physicians had two-thirds of the private practice cases under treatment indicates that a number of physicians were specializing in the treatment of venereal diseases, especially syphilis. This may partly account for the fact that 7 per cent of the patients under treatment in San Francisco did not reside in the city.

INFLUENCE OF RACE AND SEX ON PREVALENCE RATES PER ONE THOUSAND POPULATION

In Tables 2 and 3 the cases of venereal disease are divided so as to show the distribution by sex and color of the patient, and by the rate per one thousand population of patients under treatment for syphilis or gonorrhea. The venereal disease prevalence rate for San Francisco is 11.2 per one thousand. The rate for syphilis is 6.2, and that for gonorrhea 5.0. This rate for syphilis, higher than for gonorrhea, has been found true in other communities surveyed, and is largely due to the comparatively greater duration of the treatment for syphilis. Among the white population the proportionate number of syphilitics under treatment exceeded those of the Chinese, Japanese, and Mexican races. However, the gonorrhea rate is slightly higher among “other” races than it is for the whites. Strangely enough, the low syphilis rate among the “other” races is due entirely to the low rate in the males. The rate for syphilis among the females in the Chinese, Japanese, and Mexican races is more than one-half as high again as that among the white females. It is interesting to note that the males seek treatment earlier for their syphilitic infection than do the females, and, furthermore, among both sexes the white popula-

TABLE 2.—Total Number of Cases of Syphilis and Gonorrhea Under Treatment or Observation in Private Practice and in Public Clinics, Hospitals and Institutions, and the Case Rates per 1,000 Population, by Sex and Color, in San Francisco, California, on August 1, 1931									
Diagnosis	Total			White			Other Color		
	Both Sexes	Males	Females	Both Sexes	Males	Females	Both Sexes	Males	Females
Total cases under treatment:									
Syphilis and gonorrhea	7,105	4,950	2,155	6,697	4,677	2,020	408	273	135
Syphilis	3,959	2,565	1,394	3,757	2,455	1,302	202	110	92
Gonorrhea	3,146	2,385	761	2,940	2,222	718	206	163	43
Case rates per 1,000 population:									
Syphilis and gonorrhea	11.2	14.6	7.3	11.2	15.0	7.1	10.3	10.2	10.5
Syphilis	6.2	7.6	4.7	6.3	7.9	4.6	5.1	4.1	7.2
Gonorrhea	5.0	7.0	2.6	4.9	7.1	2.5	5.2	6.1	3.3

TABLE 3.—Case Rates per 1,000 Population for Early and Late Syphilis, and for Acute and Chronic Gonorrhea, for Males and Females of Both Colors, as Indicated by the Total Number of Cases Under Treatment or Observation, in San Francisco, California, on August 1, 1931.

Diagnosis	Males			Females		
	Total	White	Other Color	Total	White	Other Color
Syphilis	7.6	7.9	4.1	4.7	4.6	7.2
Early	1.9	2.0	1.1	1.1	1.1	1.3
Late	5.7	5.9	3.0	3.6	3.5	5.9
Gonorrhea	7.0	7.1	6.1	2.6	2.5	3.3
Acute	3.4	3.5	2.7	1.1	1.0	1.5
Chronic.....	3.6	3.6	3.4	1.5	1.5	1.8

tion comes to treatment earlier than do the "other" races. These facts are brought out in Table 3. Proportionately more patients seek treatment for gonorrhea in the acute stage among both sexes and races than do so for early syphilis.

CASES NOT UNDER TREATMENT BY LICENSED PRACTITIONERS

During this survey the American Social Hygiene Association made an effort to determine the number of persons with a venereal disease infection who sought treatment from other than an authorized medical source.¹ The results of this effort revealed that out of 335 drug stores in San Francisco, 102 reported having 1,868 requests in a single month for remedies for self-treatment of syphilis or gonorrhea. Based on the experience of these 102 druggists, it is estimated that there are approximately 5,700 persons who applied to all druggists in San Francisco for this type of treatment in a month. Thus, more than twice as many persons sought treatment from drug stores as applied to a qualified medical source for treatment of the infection. This does not include the number of persons who sought no treatment, or

who went to quacks, or to unprofessional practitioners such as Chinese herbalists, or local "wise women," or who secured remedies for self-treatment from "mail-order specialists" and remedy companies located outside the city. This condition of seeking unauthorized medical care for the treatment of venereal diseases has been found to exist in other large cities which have been surveyed, notably in Chicago, New Orleans, and Philadelphia. The inefficacy of this type of treatment is constantly apparent from the large percentage of these patients who ultimately come to the public clinic for treatment, stating that before coming to the clinic they resorted to drug-store aid or self-medication. Of 135 patients interviewed in two clinics, 52.6 per cent stated that they had sought such treatment before coming to the clinic. A measure of the educational attitude of the average individual with syphilis can be shown further through a report of interviews with 445 young men, seen in public places and on the streets. When asked in a casual way what one should do if infected with a venereal disease, 36 per cent suggested going to a drug store, 8 per cent suggested using some home remedy, 5 per cent advised doing nothing at all (as the disease would disappear without any treatment), 6 per cent suggested going to herbalists, and 45 per cent suggested going to a physician or clinic. To summarize, 55 per cent suggested improper treatment, and 45 per cent treatment by qualified practitioners.

PREVALENCE OF VENEREAL DISEASES IN OTHER LARGE METROPOLISES

Among the twenty-five communities surveyed for the number of cases of venereal disease under observation or treatment as of any one day, there are five cities which, in one respect or another, resemble San Francisco. The prevalence rates for these individual communities are shown in Table 4.

TABLE 4.—Prevalence Rates for Syphilis and Gonorrhea per 1,000 Population Shown by Sex of the Patient, for Six Cities in the United States

	Both Sexes		Males		Females	
	Cases	Rates	Cases	Rates	Cases	Rates
San Francisco:						
Syphilis and gonorrhea.....	7,105	11.2	4,950	14.6	2,155	7.3
Syphilis	3,959	6.2	2,565	7.6	1,394	4.7
Gonorrhea	3,146	5.0	2,385	7.0	761	2.6
St. Louis:						
Syphilis and gonorrhea.....	13,383	15.8	8,723	20.7	4,655	10.9
Syphilis	7,431	8.8	4,531	10.7	2,900	6.8
Gonorrhea	5,952	7.0	4,197	10.0	1,755	4.1
Baltimore:						
Syphilis and gonorrhea.....	10,707	13.3	6,531	16.5	4,176	10.2
Syphilis	7,462	9.3	4,049	10.2	3,413	8.4
Gonorrhea	2,245	4.0	2,482	6.3	763	1.9
Portland, Oregon:						
Syphilis and gonorrhea.....	3,242	10.7	2,141	14.2	1,101	7.3
Syphilis	1,946	6.4	1,268	8.4	678	4.5
Gonorrhea	1,296	4.3	873	5.8	423	2.8
New Orleans:						
Syphilis and gonorrhea.....	4,820	10.5	3,362	15.3	1,458	6.1
Syphilis	2,676	5.8	1,736	7.9	940	3.9
Gonorrhea	2,144	4.7	1,626	7.4	518	2.2
Philadelphia:						
Syphilis and gonorrhea.....	18,809	9.1	12,905	12.6	5,904	5.7
Syphilis	9,082	4.4	5,443	5.3	3,639	3.5
Gonorrhea	9,727	4.7	7,462	7.3	2,265	2.2

TABLE 5.—Percentage of Early and Late Syphilis, and of Acute and Chronic Gonorrhea, Under Treatment or Observation in Private Practice and in Public Clinics and Institutions, by Sex and Color, in San Francisco, California, on August 1, 1931

Diagnosis	Both Sexes			Males			Females		
	Total	White	Other Color	Total	White	Other Color	Total	White	Other Color
<i>Percentage treated in private practice:</i>									
Total syphilis	51.2	51.0	54.0	53.3	53.0	60.0	47.3	47.3	46.7
Early	66.3	67.6	40.4	71.0	71.7	56.7	56.8	59.3	11.8
Late	46.4	45.8	58.1	47.5	46.9	61.3	44.5	43.7	54.7
Total gonorrhea	75.2	75.5	70.9	74.1	74.2	73.0	78.6	79.5	62.8
Acute	76.9	78.4	54.3	74.5	76.1	50.0	85.7	86.7	70.0
Chronic	73.8	73.0	84.2	73.8	72.4	91.2	73.6	74.5	56.5
<i>Percentage treated in public clinics, etc.:</i>									
Total syphilis	48.8	49.0	46.0	46.7	47.0	40.0	52.7	52.7	53.3
Early	33.7	32.4	59.6	29.0	28.3	43.3	43.2	40.7	88.2
Late	53.6	54.2	41.9	52.5	53.1	38.7	55.5	56.3	45.3
Total gonorrhea	24.8	24.5	29.1	25.9	25.8	27.0	21.4	20.5	37.2
Acute	23.1	21.6	45.7	25.5	23.9	50.0	14.3	13.3	30.0
Chronic	26.2	27.0	15.8	26.2	27.6	8.8	26.4	25.5	43.5

San Francisco's prevalence rate of 11.2 per 1,000 population for venereal diseases is about midway in the rates for this group of cities. The two extremes are those of St. Louis, 15.8, and Philadelphia, 9.1 per 1,000 population. The rates for each of these cities are much higher in the male than in the female population, both for gonorrhea and syphilis. It is most interesting to note that in each of these large cities, where there is more or less adequate clinic care for those unable to pay for antiluetic treatment, there is some uniformity of prevalence rates not only for syphilis, but also for gonorrhea. Obviously, these rates represent the very minimum of the infected population.

TOTAL PREVALENCE OF VENEREAL DISEASE IN THE UNITED STATES ²

Based on the number of cases of syphilis and gonorrhea under treatment or observation by the authorized treatment sources of approximately 20 per cent of the population of the United States, it has been estimated that there are 643,000 cases of syphilis and 474,000 cases of gonorrhea constantly under treatment or observation. A re-survey of sixteen of the twenty-five communities originally surveyed revealed that there were more cases of syphilis under treatment after an interval of three years, and fewer cases of gonorrhea. The evaluators of these data interpret these changes in the prevalence rates in the triennial period as indicating that a greater number of individuals are seeking authorized treatment for their syphilitic condition rather than that there is an actual increase in the number of persons freshly infected. However, before a true index of the trend can be established, several basic factors must be determined; otherwise these surveys are simply representative of the very minimum of infected population. For example, there must be some assurance that most of the infected population have sought authorized medical care and remained under such treatment until adequately treated, and further, a whole series of resurveys covering the same territory must be made.

PERCENTAGE OF VENEREAL DISEASE CASES IN PRIVATE PRACTICE AS COMPARED WITH PUBLIC CLINICS IN SAN FRANCISCO

One of the most interesting phases of the survey is the distribution of the cases of venereal disease in the public clinics and in private practice, the details of which are shown in Table 5. There is practically an equal distribution of the syphilis patients under care in private practice as compared with those in public clinics among both the white and "other" races, whereas approximately three-fourths of the gonorrhea patients are under private care. The only real departure from this distribution is among the female gonorrhea patients of the Chinese, Japanese, and Mexicans, where this three-fourths is reduced to two-thirds of the cases under treatment in private practice. When an analysis is made of the distribution of cases by stage of infection, much of this regularity disappears. Among the cases with early syphilis a higher percentage of the females are under treatment in public clinics than males, while twice as high a percentage of the females of "other" races seek treatment for early syphilis in public clinics than do the white females. These differences are not so great for the two racial groups for late syphilis. Among the patients with acute gonorrhea a higher percentage of the males of both racial groups are under treatment in public clinics than is true of the females. However, the distribution of the chronic cases of gonorrhea is quite different; the percentage of white males and females in public clinics is very nearly the same, but for the "other" races the percentage of females in public clinics is five times that of the males.

It is interesting to note that San Francisco has fewer of its venereal disease cases in public clinics than have Baltimore, Philadelphia, Knoxville or New Orleans, where the proportion in public clinics is 72 per cent, 55 per cent, 52 per cent and 50 per cent, respectively,³ as compared with 38 per cent in San Francisco.

TABLE 6.—*Annual Incidence Rates per 1,000 Population for Early and Late Syphilis and for Acute and Chronic Gonorrhea, for Males and Females of Both Colors, as Indicated by the Number of New Cases Accepted for Treatment for the First Time During the Month of July, 1931, in San Francisco, California.*

Diagnosis	Males			Females		
	Total	White	Other Color	Total	White	Other Color
Syphilis	26.9	27.8	16.2	15.8	15.4	23.4
Early	14.2	14.8	7.7	6.6	6.4	12.2
Late	12.7	13.0	8.5	9.2	9.1	11.2
Gonorrhea	36.4	36.7	32.5	14.6	13.5	38.4
Acute	22.5	22.7	20.3	9.2	8.2	30.9
Chronic..	13.9	14.0	12.2	5.4	5.3	7.5

INCIDENCE OF VENEREAL DISEASE IN
SAN FRANCISCO

In addition to studying the prevalence or number of persons who are constantly under treatment or observation, information also was collected as to the number of persons who came for treatment for syphilis or gonorrhea for the first time during the month of July, 1931. These admissions were listed as the first-time admissions to any treatment source for the present infection. Approximately one-half of these persons on first admission had old infections which were believed, in some instances, to have been reported erroneously, although the patient denied previous treatment. However, it is definitely known that there are many cases of both gonorrhea and syphilis where the patient goes through his primary and secondary stage without any medical attention. In a recent study in which the history of infections among patients with latent syphilis was thoroughly analyzed, it was found that there were a number of cases of syphilis among the females where knowledge of the infection was completely lacking on the part of the individual until she sought treatment for some other disease, and was found under a routine test to be Wassermann-positive.

The total annual incidence rate for venereal disease in San Francisco (including first-time admissions of chronic cases) is 47.9 per 1,000 population. The incidence rate for early syphilis is 10.7, and for acute gonorrhea, 16.3. Based on the incidence rates for early syphilis and acute gonorrhea, it is estimated that a minimum of 17,000 fresh infections occur annually in San Francisco.

In thirteen other cities of the United States⁴ similarly surveyed for the incidence of venereal diseases, the rates per 1,000 population for acute gonorrhea and for early syphilis were higher in five cities and lower in eight than were the rates for San Francisco. It is of interest to note that in most instances the communities with lower rates were the large cities such as Philadelphia, New Orleans, Birmingham, and Baltimore, while the smaller cities such as Dallas, Huntington, Lexington, and Eldorado had the higher. The more adequate public clinic facilities in these metropolitan areas may in some measure account for the differences.

In Table 6 the incidence data are shown in detail for San Francisco by sex and race of pa-

tients, and by stage of infection at the time of seeking treatment. Among the white syphilitics a larger proportion of males than females sought treatment early, whereas the reverse of this is true of the syphilitic Japanese, Chinese, and Mexicans. Regardless of the sex or race of the patients, more come to treatment for gonorrhea in the acute stage than wait until the infection becomes chronic.

SUMMARY

The prevalence survey in San Francisco differs from that of other communities in that it has a large Chinese, Japanese, and Mexican population.

The prevalence rate per 1,000 population is based on the reports of 1,649 sources of treatment in San Francisco, 83 per cent of which were physicians. The public clinics have under treatment or observation 34 per cent of the total cases. Approximately two-thirds of the physicians did not have any venereal disease patients under treatment at the time of the survey; however, a number of the physicians were specializing in the treatment of these diseases, particularly syphilis. This may account in part for the fact that 7 per cent of the patients under treatment in San Francisco did not reside in the city. The venereal disease prevalence rate is 11.2 per 1,000 population, the rate for syphilis is 6.2, and for gonorrhea is 5.0.

Among the white population the proportionate number of syphilitics under treatment exceeds that of the Chinese, Japanese, and Mexicans. However, the gonorrhea rate is slightly higher among the "other" races than it is for the whites. The syphilis rate is especially low among the males of the "other" races, while the rate among the females is more than one-half as high again as among the white females.

The American Social Hygiene Association, which made an inquiry into the extent of quackery and the drug store treatment of venereal diseases, found during this survey that approximately 5,700 persons applied to drug stores in San Francisco in a single month; thus more than twice as many persons sought treatment from a drug store for venereal disease as applied to a qualified medical source for treatment of their infection. Further data as to the number of such afflicted persons not seeking professional care were found among 135 patients under treatment in two clinics, 53 per cent of which stated that they had sought such treatment before coming to the clinic. The educational attitude of the average individual with syphilis can be seen from the report of interviews with 445 young men, 55 per cent of whom suggested improper treatment, while 45 per cent proposed a clinic or a qualified practitioner.

The prevalence rates for San Francisco compare favorably with those of other cities of a comparable size.

Based on the number of cases of syphilis and gonorrhea under treatment or observation by authorized sources of treatment for approximately 20 per cent of the population of the United States, it is estimated that 643,000 cases of syphilis and 474,000 cases of gonorrhea are under treatment day by day.

There is practically an equal distribution of cases of syphilis between the private practitioners and the public clinic for both the white and "other" races, whereas approximately three-fourths of the gonorrhea patients are under treatment in private practice. However, when analysis is made of the distribution of cases by stage of infection, much of this regularity disappears. Among the cases of early syphilis a higher percentage of the females are under treatment in public clinics than males, and twice as high a percentage of the females of "other" races seek treatment for early syphilis in public clinics than do the white females. These differences are not so great for the two racial groups for late syphilis. Among the patients with acute gonorrhea a higher percentage of males of both racial groups are under treatment in the public clinic than is true of the females.

It is interesting to note that San Francisco has fewer of its venereal disease cases in public clinics than Baltimore, Philadelphia, Knoxville or New Orleans, where the proportion in public clinics is 72, 55, 52, and 50 per cent, respectively, as compared with 38 per cent in San Francisco.

In determining the incidence of venereal disease in San Francisco, it was found that approximately one-half of the persons reporting for the first time for treatment for the present infection were already in the late or chronic stages. However, if an estimate is based on just the number of acute cases of gonorrhea and early cases of syphilis, it is found that a minimum of 17,000 fresh infections occur annually. The incidence rate per 1,000 population for early syphilis is 10.7, and for acute gonorrhea 16.3. In thirteen other cities of the United States similarly surveyed, the incidence rates for early syphilis and for acute gonorrhea were higher in five of the cities and lower in eight than were the rates for San Francisco. It is of interest to note that in most instances the cities with lower rates were the large cities such as Philadelphia, New Orleans, Birmingham, and Baltimore, while the smaller cities such as Dallas, Huntington, Lexington, and Eldorado had the higher rates. The more adequate public clinic facilities in these metropolitan areas may in some measure account for the differences.

Among the white syphilitics a larger proportion of the males than females sought treatment early, whereas the reverse of this is true of the syphilitic Chinese, Japanese, and Mexicans. In each racial group a greater number come to treatment in the acute stage of gonorrhea than wait until the infection becomes chronic.

Bureau of Public Health.

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3. Prevalence of Venereal Disease in New Orleans, Louisiana. *Public Health Reports*, Vol. 47, 22, p. 1196.
4. Prevalence and Incidence of the Venereal Diseases in Dallas, Texas, in Comparison with Other Large Cities, Table 6 (unpublished).

DISCUSSION

J. C. GEIGER, M. D. (Director of Public Health, San Francisco).—Doctor Clark's paper presents data that are of definite importance to those who are interested in the problem offered by the incidence of syphilis and gonorrhea. These data give more nearly a true picture of the actual incidence of these important diseases, for the reporting of both gonorrhea and syphilis, as required by law and regulation, by number, is notoriously inaccurate and incomplete.

Existing conditions demand more attention than that given them, and they indeed present a constant challenge to the physician and the health official. Further progress in the control of all communicable diseases, and particularly in these diseases, lies in education. Police methods may have a rôle to play, but education and epidemiology are the procedures of intelligent approach.

There is a truly rich opportunity afforded, to accomplish certain aims at least, in the combination of forces by the physician and the pharmacist. The patient comes to the pharmacy for assistance, and if the pharmacist is honest with himself and fair to the patient the advice given is to "seek competent medical service." There is no more dangerous form of "counter prescribing" than that done in the pseudo-treatment of syphilis and gonorrhea.

An added point, emphasizing the need for educational effort, is found in the fact brought out by Doctor Clark that treatment too frequently is sought relatively late in these diseases. If treatment is to be successful it is as important that it be instituted early in the course of the infection as it is that it be prolonged over considerable periods of time.



ROBERT V. DAY, M. D. (1930 Wilshire Boulevard, Los Angeles).—A striking observation of the authors' is the fairly equal incidence of venereal diseases at any one time, or for a whole year, in widely separated cities of the same class in the United States.

This paper does not readily lend itself to relevant discussion because of the fact that it represents, and limits itself, to actual findings with an ultra-conservative minimum of discussion. However, some comments may be safely ventured.

It is doubtful if all those sending in their reports, having no cases, have been overmeticulous. For example, 62 per cent of physicians reported no cases at all. It had been my impression that there is no such large percentage of regular physicians who do not treat venereal diseases to some extent, perhaps loath to make reports over their own signature. It is my further impression that the incidence of venereal diseases, especially gonorrhea, is considerably higher than indicated in the reports at San Francisco and other localities. It is surprising and gratifying, however, that the authors were enabled to secure from the widely varying sources as complete data as they have. Human nature being what it is, such statistics are bound to understand the incidence of venereal disease and due allowance should perhaps be made for this probability. Indeed the authors several times employ the term "minimum" as applied to "incidence," "prevalence," etc. Moreover, everyday experience shows that there are an enormous number of people with latent syphilis who have never even suspected it. Finally, there is abundant opportunity for improvement in treating and managing patients with venereal disease, both in private practice and in clinics. Treatment by pharmacists is a source of greatest danger and economic detriment to the patient, and should be outlawed.

The large incidence of venereal disease among the female of "other races" is likely explained by the fact that males predominate, and that there is among the females a disproportionate number of prostitutes, regular or clandestine. In case of the Chinese the fact that the Exclusion Act has been in force so long (since 1882) means that an enormous percentage are males over 50 years of age, many of whom contracted syphilis before the days of intensive intravenous and intramuscular injections, and consequently prone to

develop late tertiary manifestations of syphilis such as cardio-vascular disease, etc. Of course, under such circumstances one would expect syphilis to be a considerable factor in considering death statistics in this race in an American city.

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H. J. TEMPLETON, M. D. (3115 Webster Street, Oakland).—This article brings out facts which cause us to think that the eventual control of syphilis will be greatly furthered by educational campaigns directed towards the public and the pharmacist, as well as the physician.

That the public is sadly in need of instruction in regard to the proper treatment of syphilis is evidenced by the high percentage (52 per cent) of patients who had been improperly treated before applying for clinic treatment, by the fact that 36 per cent of young men advised drug store treatment for venereal diseases, and also by the fact that one per cent of the patients were under the care of irregular practitioners who could not legally administer the necessary drugs.

That the pharmacist is an important factor in the control of venereal diseases is brought out by the estimate that 5,700 persons applied to drug stores for treatment in one month. The modern conscientious pharmacist refuses "counter prescriptions" in such cases, and refers these patients to proper sources. But there are still too many patients telling us that their primary sores were treated by powders or styptics given them by their druggists. From the cold business standpoint the pharmacist should realize that there is much more profit from the sale of arsphenamin to the physician than from the proverbial "dime's worth of calomel powder." Pharmacists should be circularized with pamphlets of information in any anti-venereal campaign.

Social and economic factors are largely responsible for the large number of patients (34 per cent) under treatment in public clinics. However, it is my belief that many of these could be kept under treatment by their private physicians if the profession would consider more carefully the economic problems of the syphilitic patient. I have always thought that fees should be relatively low in such cases. This belief is based upon the knowledge that treatment for syphilis must be continued over a period of years in order to be effective. We must adjust our fees to make this possible for the patient of ordinary means. Particularly is this necessary in these times of financial stress and social change. If we permit our patients to become charges of the public clinics they are in great danger of acquiring the "clinic habit" and of demanding further clinic care even after their financial crises have passed.

THE CHALLENGE OF ALLERGY IN MEDICAL PRACTICE

By ALBERT H. ROWE, M. D.
Oakland

DISCUSSION by Samuel H. Hurwitz, M. D., San Francisco; V. G. Alderson, M. D., Oakland.

THAT allergy may be the most frequent cause of human symptomatology becomes evident as a widening appreciation of its manifestations, and the frequency of its mild and chronic disturbances, occurs. Many of the allergic manifestations up to recent years were of unknown etiology, and afflicted patients were doomed to years of invalidism, pain, and vain searching for relief. It is safe to say that practically all individuals at some time during their lives have either brief or prolonged symptoms due to allergy. A recent survey by the writer of two thousand entrants at the University of California showed an incidence of a probable family history of allergy in 35 per cent, a personal history of probable allergy in 33 per cent, and a

familial and personal history of allergy in 18 per cent. These statistics present a minimal number of such symptoms, since allergic disturbances in infancy and childhood, and many mild ones in later life, are not elicited in routine history taking. Therefore no physician can ignore allergy, since it causes symptoms necessary of recognition by the general practitioner and by every specialist.

What should direct the physician's suspicion toward allergy? The history is of paramount importance. Every patient must be questioned routinely with the idea of allergy in mind. Thereby indications of an allergic disturbance, mild or severe, acute or chronic, may be uncovered quite apart from the main complaint of the patient. A record of the occurrence in the family history, including that of grandparents, father, mother, brothers, sisters, aunts and uncles, of any of the conditions commonly due to allergy, such as asthma, hay fever, recurrent bronchitis, head colds or sinusitis, hives, eczema, angioneurotic edema, recurrent headaches or migraine, and certain digestive disturbances should direct attention to an exaggerated predisposition to allergy. The occurrence of any of these disturbances in the personal history of the patient indicates allergic susceptibility. In addition, a familial or personal history of food dislikes or disagreements points to the possibility of food allergy, while known susceptibility to animal emanations, dusts, pollens or other air-borne substances points to inhalant sensitizations. The cyclic recurrence of symptoms, especially when no definite pathology is present or where other types of therapy have failed in control, should suggest the possibility of allergy.

BRONCHIAL ASTHMA

Bronchial asthma is usually due to food allergy in infancy and childhood.¹ Inhalant allergies due to pollens, dusts, miscellaneous substances and fungi have to be considered with advancing age. The frequency of bacterial allergy as a cause of asthma is uncertain. It may be an occasional fundamental cause, though more likely it is secondary. Though few patients are relieved by the use of vaccines alone, the possibility of bacterial allergy as the cause of some asthmas, intractable in type and unable to be relieved by therapy based on possible ingestant or inhalant sensitizations, must be studied. It is probable that the use of improved vaccines and bacterial products will increase our recognition of the bacterial types of bronchial asthma.

Patients with any type of bronchial asthma must coöperate absolutely over long periods of time. Pollen-sensitive patients especially must be desensitized with representatives of all important groups of pollens to which allergy exists. Such treatment is best given continually for two to three years. Allergenic foods have to be excluded for months, and at times years before tolerance increases or returns. Environmental control and desensitization must be used conjointly in the eradication of animal emanation and miscellaneous allergies, including that to orris root and dusts. The production of bronchitis or asthma by allergy from fungi and yeasts occurs occasionally.

The recognition of equivalents of bronchial asthma challenges the physician. Allergists for many years have felt that spasmodic croup is often allergic. Recurrent coughs which are initiated by allergic reactions in the nose and sinusitis, suggesting an acute head cold, are frequently due to inhalant, and especially to food sensitizations. Coryzal symptoms, preceding bronchial or asthmatic attacks, have caused many patients as well as physicians wrongly to conclude that infectious colds are present which precipitate and cause the bronchial symptoms.

The fact that fever is frequently due to food allergy, and may occur in other types of allergy, is not realized and is an added reason for the usual emphasis of infection as an hypothesized cause of asthma, especially in childhood.

Thus food and inhalant allergies must be thoroughly considered in every patient with recurrent bronchitis or asthma before bacterial sensitization. Wilmer² voiced the opinion of most allergists in stating that many patients are needlessly operated on for deflected septa, polyps, enlarged turbinates, and possible infection in antrums or ethmoids, before exhaustive histories, studies and therapy from the allergic viewpoint have been done. Patients too often have tonsillectomies and nasal operations before allergic control. Bullen,³ in a study of four hundred cases of sinus disease of at least one year's duration, found asthma in only 12.25 per cent, and of these in only 8.75 per cent did the asthma start with the onset of the sinusitis or later. Asthma not infrequently is initiated after such surgery which is done on congested tissues resulting not from infection but allergy. And the benefit derived from radical nasal and sinus surgery in those patients who fail to respond to prolonged present-day allergic therapy is too frequently disappointing. Such surgery should always be done in conjunction with a well-ordered and supervised control of possible allergies.

HAY FEVER

Seasonal hay fever in the spring, summer, and fall is usually due to pollen allergy. At times food allergy, or a special dust or animal emanation sensitization, may produce or complicate such symptoms. Patients frequently react to many pollens which are not productive of clinical allergy. However, they must be kept in mind as potential dangers. The skin-negative patient with pollen hay fever is met with not infrequently, which problem receives discussion later in this paper. Pollen allergy, moreover, may produce seasonal congestion, and occlusion of the nose and sinuses, without definite symptoms of hay fever. For the best results the physician should have an intimate knowledge of the flora where the patient lives. The fact that pollen may blow for hundreds of miles must be remembered in dealing with the hay fever of an occasional patient.

NASAL AND SINUS ALLERGY

The nose and throat specialist is confronted with the necessity of constantly differentiating between allergy and infection in the nose and sinuses.

The edematous, boggy, glistening grey mucosa is quite pathognomonic of allergy as contrasted with the red, turgid membrane with the purulent discharge due to infection. Polypoid degeneration often arises in such allergic membranes. Even where demonstrated infection of the sinuses is present, especially in the chronic sufferers, allergy has to be considered as a possible fundamental cause. Vasomotor rhinitis is frequently due to allergy, and is relieved by the elimination of foods or desensitization to inhalants. Some are undoubtedly due to bacterial allergy. A few are helped by vaccines and surgery, but the possibilities of food and inhalant allergies should be thoroughly considered before surgery is done. The demonstration of mucous membrane swellings in the antra by x-ray, and especially by displacement technique does not necessarily indicate infection, since allergy not only produces edema of the mucosa of the nose, but of the antrums and sinuses, as emphasized by Proetz.⁴ The cyclic or seasonal recurrence of symptoms, the pale, boggy, shiny mucosa, the absence of fever, sneezing and especially itching, eosinophilia in the blood or nasal secretion, and a positive family or personal history of allergy, all point to possible hypersensitiveness as a cause of nasal and sinus congestion.

GASTRO-INTESTINAL ALLERGY

Increasing recognition of the frequency of food allergy as a cause of symptoms in the alimentary tract⁵ from the mouth to the anus is occurring. Canker sores and swellings of the membranes of the lips, cheeks, and tongue; spasmodic disturbances in the esophagus, stomach, and intestines; gastric distress and indigestion, diarrhea, mucous colitis, constipation, bowel irritability and anal pruritus are some of the conditions due at times to allergy. This etiology is especially likely if pathologic findings are not present, and food allergy must be thoroughly considered before surgery is done. Many sufferers from gastro-intestinal allergy have been subjected to needless operations in the past.

Anorexia, particularly in childhood, is frequently caused by allergic reactions in the stomach or intestines, or possibly to a generalized toxemia arising from food allergy. This cause of lack of appetite is not generally recognized. Food aversions are often protective, and when allergenic foods are eliminated, a normal desire for food arises for the first time in a child's or adult's experience, and weight, strength and energy increase even when the required elimination excludes the supposed essential foods, wheat, milk, and egg.

Recurrent attacks of vomiting, especially in childhood, are frequently due to food sensitizations. They are usually equivalents of a later migraine. That the acidosis resulting from such vomiting is secondary to the allergic disturbances, rather than the fundamental cause of the symptoms, was originally pointed out by Schloss.⁶

Since canker sores are frequently due to allergy, many students have suggested that peptic ulcer may at times also be due to allergy, resulting in the

Arthus phenomena. Ivy and Shapiro⁷ in this country, and more recently several Italian investigators⁸ have accumulated experimental evidence in favor of this hypothesis. The writer has studied several patients with typical symptoms of ulcer which are due entirely to food allergy. Kern and Stewart⁹ have found that relief of symptoms from exclusion of reacting foods, as well as a frequent familial and personal history of allergy occurred in a series of thirty-two patients with peptic ulcer.

Pains in various parts of the abdomen may be due to allergy and necessitate its consideration in all differential abdominal diagnosis. Graham¹⁰ lists allergy as a second consideration in the differential diagnosis of cholecystitis.

Allergic spasm and swelling of the intestinal mucosa may produce symptoms of intestinal obstruction. Such symptoms may be associated with erythematous skin lesions, urticaria or angioneurotic edema of the skin, and even with purpura due to food allergy as described by Osler, who predicted that anaphylaxis would prove to be the etiology.

That spastic constipation with or without mucous colitis is frequently due to food sensitization needs special emphasis. Spasm of smooth muscle and mucous discharge are the two important manifestations of allergy, and the colonic tissues are logical locations for such reactions to food sensitization. Pain and soreness in the cecum and ascending colon are especially frequent. It must be stressed, however, in our consideration of allergic reactions in the gastro-intestinal tract, that actual pathology such as appendicitis or peptic ulcer must not be overlooked with fatal results to the patient.

MIGRAINE

Students of allergy who have carefully and persistently investigated migraine and recurrent sick headaches¹¹ from the viewpoint of food allergy, practically all agree that about 50 to 70 per cent of them can be relieved by the elimination of specific foods. Foster Kennedy of New York feels that localized edema of the meninges best explains the bizarre nature of symptoms complained of by many of these sufferers. The inherited tendency of migraine is stressed in the literature. A recent patient, of fifty-six years, had two maternal grandparents, three maternal aunts and four uncles, her mother, a sister, a brother, a daughter, and twenty-nine maternal first and second cousins, who also had migraine. The patient, herself, had had migraine since childhood, and during the six years since menopause her migraine had increased, contrary to the usual opinion, in frequency and severity. All skin reactions to foods were negative, but with the use of "elimination diets" her migraine has been entirely controlled.

The skepticism about food allergy as the most common cause of migraine usually is expressed by physicians who have failed to study a large series of these patients with diets based on skin tests, and with trial diets over a period of months. Such procedure is necessitated by the persistence of the allergic reactions to foods in many patients,

and to the delay in the reappearance of symptoms in others after the addition of the offending food to the patient's diet.

ALLERGIC TOXEMIA

The writer first described toxemia due to food allergy in 1928¹² in this Journal, and since then¹³ he has emphasized the importance of its recognition in other publications. Kahn has stressed toxemia resulting from pollen allergy. Food and pollen allergy may both produce toxemia in the same individual. That fatigue, aching of the body, exhaustion, nervousness, inability to concentrate and think clearly, is not infrequently due to food allergy must be generally recognized. A recent patient with this manifestation of allergy had spent years seeking relief in Germany, England, and many of the chief medical clinics of this country. Negative findings had universally been obtained and everywhere a diagnosis of neurosis had been rendered. Besides several definite food reactions and known food disagreements, he gave a history of hay fever and large pollen reactions to practically all pollens with which he was tested.

CUTANEOUS ALLERGY

Urticaria in childhood usually is due to food allergy. In adult life, foci of infection are at times responsible for hives, though food must still be the outstanding consideration. Angioneurotic edema is most frequent in adult life, and is to be studied with the realization that food allergy, and at times bacterial sensitizations, are the usual causes. The fact that angioneurotic edema may occur in the gastro-intestinal tract, in the cerebral as well as the peripheral nervous tissues, in the bronchial and urogenital tracts, and probably in other regions of the body, and that a generalized edema of large areas of the skin may occur must be remembered.

Eczema in infancy and childhood is usually due to food allergy. However, contact and inhalant allergies must be kept in mind, and are usually evidenced by routine history and skin testing with all important foods, inhalants, and miscellaneous allergens. Eczema in adult life due to food allergy alone is not unusual, as shown in the case of a man of twenty-eight years who had had an itching dermatitis all over the body which had resisted dermatological therapy, including roentgen ray and quartz light exposures. A diagnosis of epidermophytosis with a secondary epidermophytid had been made. With "elimination diets," the itching ceased within ten days, and the dermatitis gradually disappeared in the course of about five weeks. Eczema localized to definite areas, such as the aural canals, the hands, special parts of the face, body or legs, or to the anal tissues causing so-called pruritus ani, may arise from food allergy, illustrating the well-recognized tendency of allergy to produce localized manifestations.

Localized dermatitis, especially on the exposed surfaces of the body, is frequently due to contact allergens, chief among which are pollens and the resins and oils of the leaves of grasses, flowers, weeds and shrubs. Such patients should be thor-

oroughly studied from the allergic viewpoint, and should be tested cutaneously and intradermally with all types of allergens. Patch tests with pollen oils and with all leaves and flowers met with in the patient's environment should be done, especially if the dermatitis is exaggerated in seasons other than winter. Patch tests, with all other materials and substances contacted by the patient, must be carried out when pollen or vegetation allergy does not explain the eruption. Such problems of dermatitis require persistence and continued search, study and control over periods of months, if necessary, to ferret out the underlying etiology without which relief from the invaliding dermatitis is usually unattainable.

MISCELLANEOUS MANIFESTATIONS

Increased frequency of urination associated with burning, muscle spasm of the bladder, and at times excoriation of the vulval tissues and chafing of adjacent skin may be due to food sensitizations. Purpura due to hypersensitivities to foods has already been mentioned. Uterine allergy, including dysmenorrhea and leukorrhea, have been described by Duke and recently by the writer. Ocular allergy has been studied in several of the writer's patients and Wood's¹⁴ recent monograph on the investigative phases of this type of allergy is of interest. A woman of fifty years came complaining of scleral hemorrhages, ocular burning, and inability to get satisfactory glasses. An orbital hemorrhage had to be evacuated with a conjunctival incision. It was found that food allergy was producing the hemorrhagic tendency, and that pollen allergy, especially to that of flowers and acacia, was causing ocular burning and congestion. A hair from a fur made of cat hair lodging in her eye resulted in acute edema and pain. With the therapeutic control of all these sensitizations ocular spasms disappeared, the hemorrhagic and congestive tendencies ceased, and satisfactory glasses were made possible. Vernal catarrh with increasing frequency, moreover, is proving allergic in origin. The possibility of allergic reactions in cardiac and vascular tissues as a contributing cause to irregularities in rhythm, and to hypertension, needs continued consideration.

Rackemann,¹⁵ in a recent article on allergy in arthritis, voices the current opinion that rheumatoid arthritis is due to allergic reactions to bacteria of the delayed inflammatory tuberculin type of reaction. In addition, the writer¹ has observed patients with definite joint pains arising from food allergy, and has reported an instance of intermittent hydra-arthritis due to specific food sensitizations.

DIAGNOSIS

The history, skin testing, trial diets and environmental tests are all of great value in arriving at the diagnosis of the allergic etiology.

1. It has already been stated that a familial or personal history of a recognized allergic disturbance emphasizes such predisposition. The perennial recurrence, and especially the cyclic recurrence of symptoms, is in favor of food allergy. Manifestations of food allergy, moreover, are fre-

quently relieved by going from a region near the ocean into a dry or high interior section. This result is probably not due to humidity, but to some atmospheric state as yet unknown. The history of definite food dislikes or disagreements may point to a fundamental food sensitization, though such allergies are not always realized by patients. Whims, prejudices and nervousness, however, account for many distastes. Pollen sensitizations are usually indicated by histories of seasonal variation. A knowledge of the botanical flora of the region round about the patient is imperative. The history also may indicate the sensitizations to animal emanations, orris root, pyrethrum, house dust, fungi, and other occupational or environmental inhalants. A detailed record of the type of furnishings, carpets, bedding, animal pets, and house plants is frequently of value. In addition, every patient should be carefully questioned about possible idiosyncrasies to medicines, drugs, cosmetics, and toilet preparations. Finally, bacterial allergy may be suspected when there is a history of chronic sinusitis or bronchitis though, as previously stated, apparent head and bronchial colds are often the results of inhalant and, especially, of food allergies.

2. Skin testing is a valuable aid in the diagnosis of allergic etiology. It must be emphasized, however, that skin tests are not infrequently negative in the presence of pollen and at times of other inhalant allergies, and very frequently negative especially after infancy, when clinical allergies to foods exist.¹⁶ Moreover, skin reactions may be moderately or strongly positive to allergens which are not actively causing symptoms.

Initially, it is best by the scratch method to test all patients suspected of allergy with most important food, pollen, animal emanation, dust, and miscellaneous allergens. Special problems need additional tests with a larger number of foods or inhalants, according to the history and the patient's individual challenge. It is then wise to test intradermally with all important inhalants to which the patient has not reacted. Intradermal testing, without preliminary scratch testing, may give severe constitutional reactions. Intradermal tests with extracts of foods which have failed to react by the scratch test may give additional help, though such results have been disappointing in the writer's experience. Special extracts of dusts, furnishings, carpets, and substances met with in special or working situations may also be necessary to prepare for testing purposes.

Patch testing in cases of dermatitis becomes of increasing importance. All vegetation, household furnishings and dusts, wearing apparel, toilet articles, cosmetics, and materials contacted in work or recreation must be under suspicion. Tests should be read in from twenty-four to forty-eight hours, and delayed reactions within a week may occur.

In pollen-sensitive patients negative to skin testing, the dropping of a little dry pollen in the lower conjunctival sac usually produces a congestion and redness within one-quarter hour, after which the pollen is washed out with saline and weak adrenalin solution.

3. Because of the many negative reactions to foods causing clinical allergy, and since positive reactions to foods occur to which allergy does not exist, trial diets for diagnostic purposes are most important. The writer continues to find his "elimination diets,"¹ modified by skin reactions and histories of food dislikes and disagreements, of great value. When directions for the use of these diets are carefully followed, satisfactory meals containing proper calories, minerals and vitamins are assured. Absolute and prolonged coöperation on the patient's part is essential, however, for satisfactory results. The relief of symptoms, and the reproduction of them by the elimination and addition of the specific food, are necessary for diagnosis whether or not the skin tests are positive.

Environmental tests also confirm or disprove the possibility of dust or other inhalant allergies indicated by history or skin testing.

TREATMENT

In the following discussion of therapy, general therapeutic measures of value in the control of the various manifestations of allergy have been omitted. The relief of the causative specific allergies only are considered.

1. Inhalant allergies are relieved by proper environmental control, based on the sensitizations indicated by history and testing. Air conditioning or pollen-filtering devices are of definite aid. Change of residence or climate may be indicated until symptoms come under therapeutic control. For satisfactory and permanent results, desensitization is necessary, with properly prepared and standardized extracts of the important inhalants to which sensitization exists. Pollen therapy, for lasting results, demands prolonged and preferably perennial administration of maximum doses, often over a period of two or three years. Antigens containing the important pollens, as they come into the air throughout the year, must be prepared. Such thorough desensitization has yielded excellent results in several of the writer's cases of pollen dermatitis. It is also of interest that camomile¹⁷ has been found to be a universal irritant to the normal skin. Certain patients are probably hypersensitive to camomile, which develops a generalized dermatitis. This is helped by the oral administration of increasing amounts of a tea made from the indigenous camomile, and by the intramuscular injection of its alcoholic extract. Desensitization to allergens of horse, cat, dog, feathers, orris root, and miscellaneous dusts is very effective if given in sufficient strengths over a long enough period. Desensitization to one type of dog hair has failed to protect against another type, in the writer's experience. Desensitization to specific fungi affecting the patient may also be kept in mind.

2. Food sensitizations must be relieved by the elimination of specific foods. With "elimination diets," the continuance of such food exclusions is effected. Tolerance may gradually increase over a period of months, although it may never return to normal. Complete desensitization, however, may reappear without reason at any time. Oral and hypodermic desensitization is not especially suc-

cessful. The milk-free diet in infancy is aided by the use of a soya bean preparation called sobee or lektizoy. A recent preparation called cemas, containing cooked and homogenized beef, vegetables, minerals, and vitamins to make a complete and balanced food for infants, is similar to a preparation the writer described in 1928.¹ Peptone therapy is of little value except in a rare instance, and the continued trial of Urbach's propeptans confirms the writer's former¹⁸ unsatisfactory results.

3. Bacterial allergy probably exists in a moderate number of patients with bronchial asthma or vasomotor rhinitis. It may be secondary to food or inhalant sensitizations. The use of various vaccines, lysates and filtrates continues to be disappointing, though constant search and hope for the effective method of therapy against these assumed bacterial allergies is retained. Surgery on the nose and sinuses should be done only after careful allergic study and control have been carried out for some months. Even then, the writer has observed, with the concomitant use of vaccines surgical results have been disappointing in many patients.

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DISCUSSION

SAMUEL H. HURWITZ, M. D. (490 Post Street, San Francisco.)—Those who have read any of Doctor Rowe's previous papers are quite familiar with his viewpoints on the rôle of allergy in the etiology of disease. For those who have not read any of his contributions this paper will serve as a satisfactory digest of his views. It is obvious that Doctor Rowe's conception of allergy is a very broad one, for only if we interpret the term in the sense of the origin of the word—altered reactivity—can any wary and careful clinical observer concede that allergy plays a part in the causation of disease almost equal to the rôle of infection. Much of the over-enthusiasm of the allergist has had its origin in the battle he has had to wage in order to make such valuable knowledge as we possess concerning allergic manifestations and their management acceptable to the skeptical clinician. This over-enthusiasm, therefore, is in the nature of an over-compensation.

Whereas no one who has studied and treated many allergic patients can deny that allergy has helped to explain many heretofore undiagnosed clinical symptoms, it is only just to point out that many clinical observers whose experience is fairly large are not inclined to accept Doctor Rowe's view of the allergic etiology of a large number of conditions whose causes are still obscure. He states, for instance, that "increasing recognition of the frequency of food allergy as a cause of symptoms in the alimentary tract from the mouth to anus is occurring" and that "students of allergy who have carefully and persistently investigated migraine and recurrent sick headaches from the viewpoint of food allergy all agree that about 50 to 70 per cent of them can be relieved by the elimination of specific foods." Certain it is that the possibility of an allergic etiology underlying many vague gastrointestinal symptoms and obscure sick headaches has been overlooked, and it is to the credit of Doctor Rowe and other clinical allergists that they have stressed this point so perseveringly. However, we do not feel that the number of clinical instances in which the allergic etiology of these conditions can be proved with reasonable certainty is as numerous as claimed by Doctor Rowe. The disappearance of symptoms following the elimination of a food to which the patient is skin sensitive, and in most instances not skin sensitive, is not sufficient proof that the food in question is the cause of symptoms. A critical clinician has the right to challenge the allergist to produce more controlled proofs of such a claim.

Furthermore, confusion exists among general physicians not intimately concerned with the management of allergic patients, as to what they may expect from treatment by specific desensitization. This is not surprising because the reported results of the value of specific desensitization have been conflicting enough to give rise to over-enthusiasm on the one hand, and gross skepticism on the other. Much of this confusion has arisen because the value of such treatment has been largely determined by statistical appraisals of the end-results achieved. Whereas such statistics are valuable, they do not help our understanding of the many factors which modify the results of this form of therapy. Of these modifying factors, heredity, changes in allergic equilibrium, multiple sensitization, massive exposure to allergenic substances, infection of the upper and lower respiratory tracts, and nervous, psychic and endocrine disturbances are among the most important. The patient with some allergic manifestation may present one or more of these complicating problems, and despite a careful specific diagnosis and the use of faultless reagents and technic, the end-results may be disappointing. On the other hand, patients who present few or none of these stumbling-blocks, or those in whom it is possible to overcome them successfully may show the full benefits obtainable by specific desensitization.

It is not surprising, for instance, that the presence of a strong hereditary factor should greatly influence the results of desensitization therapy. Desensitization in individuals with an allergic constitution may remove temporarily from the field of action one or more

allergens and thereby give relief of symptoms; but it cannot fundamentally change the altered reactivity of the body cells. That this altered reactivity is exhibited normally to more than one allergen further complicates the therapeutic problem.

Again, the allergic balance in the hypersensitive individual appears to be delicately adjusted and readily upset by many factors, especially by infection of the upper and lower respiratory tracts. Infection of the nasal accessory sinuses so frequently an accompaniment of allergic edema of the mucous membranes is a very important stumbling-block. Our ability to cope with it determines, in large measure, the success or failure of treatment by specific desensitization.

These are only a few of the stumbling-blocks which make the management of the allergic patient difficult and the results of treatment often disappointing and incomplete.

Finally, it should be stressed that the nature and mechanism of allergic phenomena are still obscure and the control of clinical observations on allergic patients difficult. For this reason, it behooves those who observe and treat many of these patients to be conservative in their claims regarding the etiologic rôle of allergy and the value of allergic therapy.

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V. G. ALDERSON, M. D. (3115 Webster Street, Oakland).—Doctor Rowe's paper not only calls attention to the challenge of allergy in medical practice, but also discusses the subject of allergy in a very clear manner.

Our medical histories should include questions regarding not only common allergic manifestations, but also regarding less commonly recognized ones, such as gastrointestinal allergy, allergic hydra-arthritis, allergic migraine, and allergic toxemia. When we, in general, take allergic histories as understandingly as Doctor Rowe takes them, his figures of the incidence of allergy will be better appreciated.

In the diagnosis and management of allergic disease, history is doubtless our most important and convenient aid. The history should, in many instances, include a personal survey of the patient's environment. In making this survey a knowledge of the flora, composition of house furnishings and personal belongings is necessary. No detail, though seemingly unimportant, should be overlooked.

Better results will be obtained in the treatment of allergic disease when not only seasonal manifestations are investigated for pollen sensitivity, but also sensitivity to other inhalants, foods and bacteria. When this is done routinely, our results will improve, especially in the treatment of seasonal hay fever and asthma.

Doctor Rowe emphasizes the need of long treatment in most allergic disease. Allergic patients should be advised of this in the beginning of their treatment. They should also be educated in their own care, as much as is practical, in much the same way as diabetics are taught to care for themselves. A diary maintained by the patient is helpful.

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DOCTOR ROWE (closing).—The writer's conviction of the frequency of allergy has been corroborated by Vaughan's recent study of all the inhabitants (508 in number) in a small community. He found that "10.8 per cent were promptly recognized as being victims of frank or major allergy" and that 48.1 per cent had had minor allergic manifestations during their lives. These patients were able to attribute their symptoms to foods in 62.6 per cent, to inhalants in 23 per cent and to contact allergens in 14.4 per cent. Gastrointestinal symptoms had occurred in 50.7 per cent, skin lesions in 47.2 per cent, nasal symptoms in 26.4 per cent, migraine or recurrent headaches in 9 per cent and asthma in 6.2 per cent. Vaughan concludes that "60 per cent of the entire population manifest clinical allergy at one time or another" and greater evidence of the frequency of allergy probably would have been revealed if skin testing and a more prolonged study of these people had been possible.

Most pediatricians realize the great frequency of allergy in childhood. That it is not more often recog-

nized in adults is due first to the fact that physicians do not take their histories with the care and knowledge of allergy that Vaughan has, and second to the fact that it is not sufficiently realized that allergy may occur without positive skin reactions especially to foods but also to pollens and other inhalants. Stevens has recently found in 50 per cent of a series of patients that skin reactions were negative to animal emanations to which the patients were clinically sensitive. In an article on "An Evaluation of Skin Reactions in Food Sensitive Patients," the writer recently studied a group of individuals who had negative scratch and intradermal reactions to foods productive of their clinical allergies. These studies also demonstrated the occurrence of non-specific positive reactions and of positive skin tests in the absence of clinical allergies to such reacting allergens. Much of the skepticism concerning the frequency of food allergy will be dissipated with the more frequent use of trial diets as well as of skin testing in the study of patients suspected of food allergy. And it should be remembered that the diagnosis of inhalant allergies at times must depend alone on careful histories.

It is emphatically stated, however, that this discussion of the importance of careful histories and the occurrence of negative skin tests in no way minimizes the great help derived from routine and thorough skin testing with ingestant, inhalant, and contact allergens.

ULTRAVIOLET COMPONENT OF CENTRAL CALIFORNIA SUNLIGHT

By JOHN MILAN FRAWLEY, M. D.

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AND

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DISCUSSION by Francis Scott Smyth, M.D., San Francisco; Professor Douglas R. Drury, Los Angeles; Lois Godfrey, M.S., Oakland.

THE value of sunlight and fresh air for the well-being of man has been established since ancient times. In modern medicine sunlight is particularly applied in such conditions as rickets, osteomalacia, and bone tuberculosis and, in general physical debility. Its therapeutic value is dependent, not so much upon heat rays or visible light rays, but upon invisible ultraviolet radiation. These rays in sunlight have a wave length varying from 290 to 313 millimicrons.

Many methods have been devised for measuring the intensity of these biologically active rays, and numerous reports have dealt with the amount existing in the sunlight of various localities.¹⁻⁸

METHOD

Webster, Hill, and Eidenow⁹ in 1924 described a method whereby the quantity of rays of short-wave length are determined by the amount of fading which takes place in a solution of acetone methylene blue. The technique is as follows:

A quartz tube, 55 millimeters long, with an inside diameter of 3 millimeters and an outside diameter of 5 millimeters, is filled with a solution of acetone methylene blue. The solution is made by adding 5.8 cubic centimeters of a 0.1 per cent solution of methylene blue (methylthionin chlorid, U. S. P.) to 30 cubic centimeters of pure distilled acetone, and making up the quantity to 100 cubic centimeters with water. This standard solution is labeled "10," and kept in a dark brown bottle.

The quartz tube filled with this solution is exposed for twenty-four hours inverted in a vertical position, and kept closed by means of a rubber tube and a glass stopper. Exposure must be made where there are no buildings or other objects to obstruct the horizon in

any direction. The amount of fading that takes place is determined by comparing the tube before and after exposure with a standard color scale. The degrees on the color scale are marked 3, 4, 5, 6, 7, 8, 9, and 10.

Some bleaching takes place when the solution is exposed in a quartz tube behind ordinary window glass,¹⁰ which indicates that rays as long as 350 millimicrons are effective in the bleaching.

Simultaneous exposures are, therefore, made,¹¹ using two quartz tubes containing the methylene blue solution. One tube is covered with a plain glass tube of 2.3 millimeters in thickness to cut off rays shorter than 320 millimicrons. The amount of fading in each quartz tube is estimated by comparing it with Hill's set of standard tubes, and the difference in the amount of fading is taken to be due to the rays shorter than 320 millimicrons and longer than 290, the lower limit of the rays discernible in the sunlight.

COMMENT

Several features are to be noted in connection with this technique.

1. It is necessary to have sufficient solution* on hand to last throughout the period of observation. It has been found that there was great variation between the fading time of different bottles of solution, and that it was necessary for several bottles to be pooled.

2. There is a latent period before fading begins to take place. This varies, with different bottles of solution, from five to fifteen minutes when the ultraviolet lamp is used, and from fifteen to thirty minutes or longer when the sunlight is used as the bleaching agent. This latent period has to be taken into account when determining the value of the unit of fading in terms of erythema doses.

3. Uniform technique must be adopted for the care of the quartz tubes. A considerable difference occurs in the fading time, depending upon whether the tubes are cleaned with alcohol and carbon tetrachlorid or are simply wiped with dry cotton. The chief difference is in the duration of the latent period before fading of the solution begins.

RESULTS

This technique was followed in making a series of determinations of the amount of ultraviolet in the sunlight of central California. A preliminary report¹¹ in 1931 indicated that the amount of ultraviolet light present in the brilliant sunshine of this region was deficient. In order to check this observation, daily measurements of the ultraviolet were carried out simultaneously at the Fresno County Hospital, Fresno, and at the Wish-i-ah Tuberculosis Sanatorium, Auberry, each week-day from 10 a. m. to 2 p. m. from April 1, 1931, to September 1, 1932. The averages of the daily readings for each month† are given in Table 1 in terms of units of fading by L. Hill's scale.

* The set of standard tubes, the quartz tubes, and the solution of acetone methylene blue may be obtained from H. N. Elmer, Monadnock Building, Chicago, agent for the manufacturers, Siebe Gorman Company, London, England.

† The average number of observations per month in Fresno was sixteen, and in Auberry was twenty. No readings were made during September at Auberry on account of vacations. No readings are recorded for the months of December, January, and February at Fresno. Miss F. Gifford, R. N., who made the observations, has added the following notes with regard to these months: "In December, nearly all the days were rainy or cloudy, and there was very little sunshine. January was negative for ultraviolet light, excepting for one day in the last week when there was one-half unit. February was negative, excepting for the 29th, which was a clear, warm day with a reading of two units."

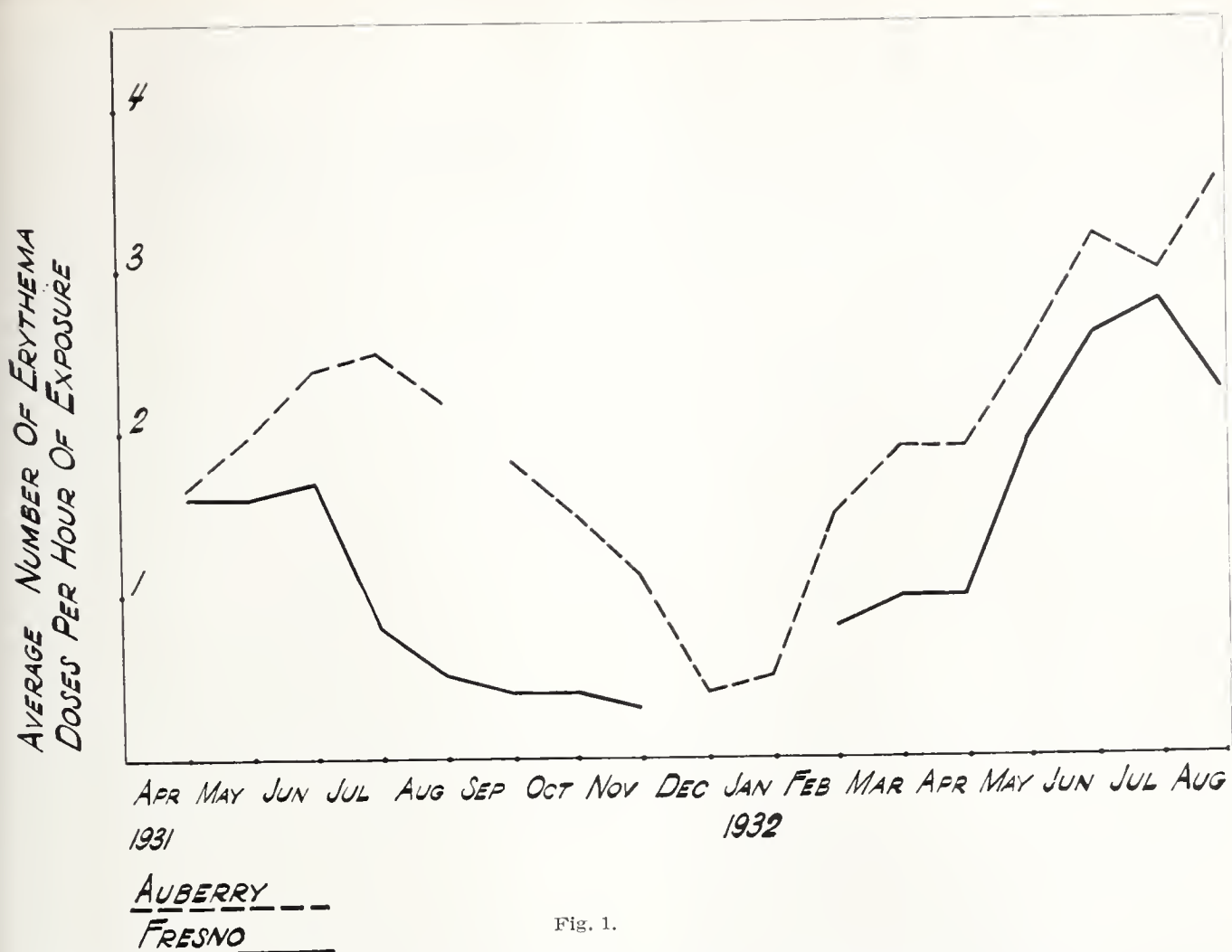


Fig. 1.

By checking the amount of fading of acetone methylene blue against the production of erythema by sunlight and by the quartz mercury vapor lamp, it was found that one unit on the scale was equal to three times the erythema dose in a person of average complexion. This compares with the finding of L. Hill, that each unit on the scale represented from two to four times the erythema dose of sunlight, depending upon whether the person exposed was a brunette or blonde. The graphic representation of the average number of erythema doses in one hour's exposure out of doors during each month is shown in Figure 1.

DISCUSSION

A study of these results indicates that a high value for ultraviolet is obtained in the sunlight at Auberry during most of the year. An average of only twenty to thirty minutes is required for one erythema dose during all seasons excepting winter. Although there is considerable yearly variation, the readings are consistently higher than those made at Fresno, only forty miles away. In order to explain this difference, it is necessary to consider the various factors upon which the

amount of ultraviolet light reaching a certain part of the earth's surface is dependent, viz., (1) universal factors, *e. g.*, the time of day, the season of the year, the altitude, distance from the equator, and (2) local atmospheric conditions, *e. g.*, cloudiness, fog, dust, and smoke. Since the observations were made simultaneously, and at the same latitude, the only factors which have a bearing are the altitude and the local atmospheric conditions. The elevation at Auberry is 2,000 feet, at Fresno 300 feet. According to Edison Pettit,¹² such a small difference of elevation make practically no difference in the amount of ultraviolet in the sunlight. This seems substantiated by the fact that on many days the readings were the same. The difference, therefore, must be due to the only other factor concerned, viz., local atmospheric conditions.

Ordinarily there is a marked difference in the atmospheric conditions of these two localities with regard to turbidity and temperature.

Auberry lies in the Sierra, above the level of the haze which is usually present in the San Joaquin Valley, in the vicinity of Fresno. The summer sky over the valley, on account of this

TABLE 1.—Daily averages of the number of units of fading by L. Hill's scale. One unit is equal to approximately three erythema doses. Readings were made from 10 a.m. to 2 p.m.

	1931									1932							
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
Fresno	2.1	2.1	2.3	1.1	0.7	0.6	0.5	0.4	....	....	....	1.4	1.3	2.7	3.5	3.7	3.0
Auberry	2.2	2.7	3.2	3.3	3.0	....	2.0	1.5	0.6	0.7	2.0	2.5	2.6	3.3	4.3	4.0	4.8

haze, is pale and does not have the deep-blue tint seen at the elevation of Auberry.

Blueness of the sky, as a measure of the quantity of short rays in the sunlight, has been described by Grundemann,¹³ who finds that a tintometer to estimate the blueness gives readings which vary in proportion to the amount of ultraviolet present. The poor transmission of ultraviolet by the hazy summer sky is confirmed by the common observation that there is no danger of severe sunburn from exposure in the valley, but that a day spent in the mountains or on the sea coast may produce a marked degree of burning. Usually during the winter, fog takes the place of the haze; and it is only after a rainfall that the haze and fog clear away completely. On such occasions, the Sierra stands out as a beautiful panorama of snow-capped peaks. The rainfall takes place only at rare intervals during the winter and spring, so that throughout the greater part of the year no suggestion is offered of the mountains which lie so close at hand.

Besides the difference in turbidity of the atmosphere there is considerable difference in temperature between Auberry and Fresno. On account of the elevation, the temperature at Auberry is not excessive; but during the midsummer months the temperature in the valley is extremely high, and it is necessary to remain indoors as much as possible throughout the heat of the day when the quantity of ultraviolet light is greatest. Consequently, even though a sufficient amount of ultraviolet were present, no benefit could be derived from it since exposure to the intense heat of the sun is impossible in those conditions for which sunlight treatments are indicated. Incidentally, the haze is not without value, since it acts as a "shade" to screen out the ultraviolet. This absence of ultraviolet, combined with the lack of moisture, helps to minimize the effect of the high summer temperature.

SUMMARY

1. Comparative measurements of the amount of ultraviolet in the sunlight were made over a period of seventeen months at Fresno and Auberry, in central California.

2. The sunlight at Auberry, which is situated in the Sierra at an elevation of 2,000 feet, was found to be highly suitable for giving sunlight treatments.

3. At Fresno, on the floor of the San Joaquin Valley, due to the screening effect of the hazy atmosphere, the sunlight was found to be deficient in ultraviolet light.

4. Moreover, high temperatures render therapeutic exposures at Fresno impracticable during the summer months.

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DISCUSSION

FRANCIS SCOTT SMYTH, M. D. (University of California Hospital, San Francisco).—In dealing with a measurement of ultraviolet radiation it is essential to gauge the activity by the erythema effect. This being a biological test, it is subject to variations in individuals and would necessitate a standard test subject. Doctor Frawley and Doctor Brown have cleverly adopted the acetone-methylene blue test by which comparisons may be made over a long period of time and in two different localities. But most important, they have not failed to link it up with the comparison back to the erythema dosage.

To a casual visitor in Central California, Frawley and Brown's report is a distinct surprise. The traditional boast of abundance in agricultural production is linked with the supposition of solar proficiency. A failure of ultraviolet effects would probably be interpreted as due to escape from sun-exposure, not unlike the procedure in tropical zones. Yet here is proof that ultraviolet rays and sunshine are not synonymous. The matter of 2,000 feet elevation is shown to be important largely because the lower atmospheric conditions disperse or occlude the essential rays. It is likely that the large eastern cities show a similar difference with their surrounding open country, where no question of the rôle of elevation is raised.

✽

PROFESSOR DOUGLAS R. DRURY (University of Southern California School of Medicine, Los Angeles).—This paper brings out the practical value of a simple device like the methylene blue method of measuring ultraviolet light; but, as is indicated, considerable care must be taken in its use. The more exact photo-electrical method is really an expert's instrument and is expensive. The methylene blue method gives all the information that the practicing physician really needs. One feels the want of a low-priced standard lamp and filters which could be used for calibration in place of the rather rough erythema method. When physicians throughout the country begin to study the light conditions in their localities, as Doctor Frawley and Doctor Brown have done, the demand should be great enough to bring down the price of these devices to a more economical basis.

The paper indicates very clearly the necessity of physicians carrying out these measurements in their own regions if they wish to prescribe heliotherapy intelligently. It is shown that the average concentration of ultraviolet may be quite different in places comparatively close together, and also that "the hours of sunlight" or the "intensity or heat of the sun" are poor indicators for use in light therapy.

⌘

LOIS GODFREY, M. S. (Wakefield Building, Oakland). Doctors Frawley and Brown, in this work, have most ingeniously overcome the difficulties inherent in the method. The filtering out by the plain glass tube of wave-lengths longer than 320 mμ, so that there remains a measure of the therapeutic wave-lengths, and the adoption of standard procedure for cleaning the tubes (the method being sensitive to extremely small impurities) make this a highly acceptable method for comparative measurements. The other recognized source of error, a significant temperature coefficient, would make the results and conclusions even more striking; undoubtedly, as between the two observation localities, Fresno has consistently the higher temperature. Hence, if temperature correction could be applied, the Fresno readings would be lower and the differences even greater.

There is a popular idea that in a "sunny" climate, such as California's, it is unnecessary to supply an additional dietary source of vitamin D. These results show that this is quite definitely not the case except in favored localities such as Auberry. The results sustain also the conclusion, from my study in Honolulu and from other studies elsewhere, that the therapeutic value of sunlight cannot at all be gauged from hours of sunlight and other observations routinely made by weather bureaus. As Frawley and Brown suggest, and as was noted in Honolulu, "visibility" high when the mountains are in view from Fresno is the most easily observed *significant* condition. Such work as this, therefore, would seem to be of great value.

⌘

DOCTOR FRAWLEY (closing).—The study of the ultraviolet component of the sunlight in Central California was the outcome of a suggestion by Dr. H. F. Helmholtz of Rochester, Minnesota. Doctor Helmholtz thought that it would be interesting to make a survey of the amount of rickets present among the babies in this region, which is noted for the long hours and the intensity of its sunlight.

Examination of the children in the Red Cross and the Fresno County Hospital Infant Welfare clinics, over a period of three years, revealed a surprisingly large proportion of children with mild rickets. In order to find an explanation for this paradoxical situation, a study of the ultraviolet in the sunlight was instituted. The results obtained in this study furnish an adequate explanation of the presence of rickets in this locality.

COMPULSORY HEALTH INSURANCE*

By FREDERICK L. HOFFMAN, LL. D.
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II

THE literature on compulsory health insurance has reached enormous proportions, and even a lifetime would not suffice for a critical study and analysis of its many provisions, rules and regulations in their effects upon medical practice and the national welfare. Essentially it is not *insurance*

in the universal and accepted sense of the term but, rather, a method of social relief closely interwoven with poor laws reform. No system anywhere pretends to be actuarially solvent, but the taxpayers' resources are available to meet deficiencies in income whenever required, and they are often heavily called on.

ORIGIN OF COMPULSORY HEALTH INSURANCE SYSTEM

The system had its origin in Germany, dating back to 1881 when Prince Bismarck realized the political necessity of meeting the demands of the increasing powers of the socialists for more adequate support of the much underpaid wage workers of Germany, growing restless under the rising costs of living and the inadequacy of the prevailing standards of living.

Being largely political in its origin the interests of the medical profession were, generally speaking, ignored, and scant attention was paid to its representatives with due consideration to professional ethics. The general tendency everywhere has been to limit the professional rights of the doctor, and as observed by the author of "This Panel Business": "There was at present a movement to extend the income limit of those entitled to insurance and at the same time to limit the total amount which any doctor can receive out of the funds." The medical profession of Germany is on record as having declared its position "to be extremely serious for the profession," and like problems have arisen in every other country where social insurance has been established. It starts invariably with a relatively small proportion of wage workers with incomes below the level of comfortable subsistence, but this is soon increased to include other wage-earning groups until gradually the entire wage-earning population, and even a considerable proportion of salaried persons, are included. The larger the proportion, of course, the narrower the sphere of private practice which everywhere has been injured to a measurable degree.

ALLOWANCES TO PHYSICIANS

Coincident with this development has been a demand for a reduction in doctors' allowances tending more and more toward a salary basis inconsistent with the highest degree of professional development. With reference to Germany, where the doctor's position has become extremely serious, it is observed: "The prevailing financial depression was leading to strong demands for cutting down medical remuneration, and politics and health insurance were so inextricably mixed that the interests of medicine tended to be swamped."

EFFECT UPON THE PANEL PATIENT

One of the most impressive discussions on this phase of the subject is a book by Dr. Erwin Liek on "The Doctor's Mission," which fortunately has been translated into English. Doctor Liek, himself, started his professional life as a panel doctor and at the outset was firmly convinced that social

* One of a series of articles on compulsory health insurance, written for CALIFORNIA AND WESTERN MEDICINE by the well-known consulting statistician, Frederick L. Hoffman, LL. D. Article I of the series was printed in the April issue, page 245.

insurance was of the greatest utility. He acquired a very large panel practice and had abundant opportunity to gain a wealth of practical experience. He speaks of the disadvantage for the sick as being chiefly the following: "In the first place, the natural relations between doctor and patients are destroyed. Entire confidence between the two is lacking. Between the patient and the doctor stands the bureaucratic administration. A person who is sick must first appeal to the employer, then he has to apply to some official and at last he goes to the doctor. This complicated course may be unimportant in case of an injury, let us say a broken bone, but this procedure is troublesome in the innumerable disorders which affect both body and mind. For many patients it is an exceedingly depressing thing that they are not merely Mr. or Mrs. So-and-so who is sick, but that they are booked by the bureaucratic machinery as No. 17,469,434. Medical secrecy, as observed by every doctor, is destroyed where there is social insurance. On every document the name of the disease is written and many of the organizations do not allow the name of the disease to be given in Latin."

INDUCES NEURASTHENIA AND MALINGERING

But this is not all. Doctor Liek enumerates further disadvantages for the sick, including the undermining of the manliness of the people, causing their physical and moral degeneration. He remarks in this connection, "If we go through the case-books of panel doctors, we find that they are overwhelmed with ridiculous trivialties and that panel doctoring produces and carefully nourishes general neurasthenia and hypochondriasis. Colleagues of mine, highly experienced in panel practice, tell me that two-thirds of the activities of panel doctors are superfluous. In Poland, where social insurance is flourishing, the disease statistics have a special column of cases superscribed 'nihilitis.'"

Liek also quotes Doctor Balmer to the effect that "the percentage of malingerers convicted of having shammed sickness rose from 2.8 per cent in 1909 to 8.3 per cent in 1922." On the other hand, he points out, "It is found that the health and healing capacity of individuals marvelously increase when they can no longer rely upon social insurance." As a matter of fact, "Sickness insurance has become a source of income to the workers in case of unemployment and distress. It need scarcely be pointed out that the misuse of social insurance, its use for obtaining not health but doles from the community, causes grave mischief."

ANOTHER BAD FEATURE

Equally suggestive are the conclusions of Dr. William A. Brend, published in his treatise on "Health and the State" in 1917. These conclusions apply to England and Wales chiefly, and reflect present-day conditions, if not more so, than the described situation many years ago.

By making the status of the doctor both political and economic in relation to his income and

security, his professional status has been measurably undermined. The doctor's duty to furnish a certificate of illness as a prerequisite to the drawing of cash benefits on the part of the insured has given him a power bound to be abused to an enormous extent. If he refuses to certify the patient as being sick and therefore unable to work, he loses prestige with his panel clientage and his patients have themselves transferred to more tolerant panel doctors. As observed in the book on "This Panel Business": "The doctors everywhere are being attacked for giving certificates too easily. Medical remuneration is being cut down, and many doctors are not earning enough to keep themselves alive."

ILL-EFFECTS UPON RISING GENERATION OF PHYSICIANS

In most countries at the present time there is a plethora of medical men all eager to seek a connection that will provide a living income. Probably never in the history of medicine has the doctor's economic position been as trying as it is now. There is everywhere a large number of new doctors being graduated who seek entrance into the profession for medical practice. Each and all must maintain a social position which involves the necessity of an adequate income which is rarely forthcoming in the case of young doctors who are confronted by well-established private practices on the one hand and panel practice on the other. Since panel practice provides a fairly definite amount of income from the start they are eagerly sought by young physicians who are untrained in the ethics of the medical profession and, therefore, more tolerant with the patients in the granting of certificates, in many instances not justified by the actual physical condition of the patient.

SOME GERMAN STATISTICS ON MALINGERING

Doctor Liek, under date of July, 1927, quotes some extremely interesting observations which I give in full as a practical illustration of the present status of social insurance in Germany, although probably in the meantime conditions have possibly grown worse.

"We have before us statistics published by the Central Organisation of German sickness insurance societies which represents the vast majority of the German local organisations, and which relate to the year 1926. These statistics are published with regard to 1,036 local organisations comprising 9,127,254 insured people. We would draw attention to the following point to start with. With regard to the reexamination of those who had stated that they were sick and required sick-pay the following extraordinary facts have emerged, which are apt to depress every fair-minded reader. In the case of 778 local organisations, with 7,918,432 insured members, 1,259,016 declared in 1926 that they were incapacitated through sickness and were invited to undergo a reexamination after the granting of a sickness certificate by the panel doctors. In the case of no less than 60 per cent of the insured workers reexamination by an independent doctor was called for. Of these 1,259,016 people who pretended that they were incapacitated through illness, no less than 198,142 immediately announced that they were well and that no further examination by an independent doctor was

called for. A further army of 219,913 declared to the reexamining doctor that they had suddenly become quite well. Of the remaining number, 292,133 workers who had pretended to be incapacitated were found on reexamination to be able to work. In other words, out of the 1,259,016 nominally incapacitated workers no less than 710,183, or 56.5 per cent, were quite able to work. It is quite superfluous to comment on these figures."

It is explained in this connection that "as a rule only those patients are asked to undergo a re-examination who arouse doubt as to whether the statements they made to the panel doctor were justified. From the amazing figures given it becomes apparent that the community is exploited by workers shamming sickness to an enormous extent. It has often been pointed out that the sickness insurance organizations become mere dole payers as soon as a period of unemployment begins." This has been the experience in other countries for which the data are available, the discovery of malingering depending largely upon the economic situation. The poison generated by this condition reacts disastrously on many members of the medical profession who must needs place their economic necessity above professional ethics. While enormous sums are squandered going to those who are not really ill but only pretending to be so, the patient actually in need of qualified care fails to receive it. As said by Liek, "Those who are really ill do not receive justice under the present arrangements. The panel doctors are so wretchedly paid that they cannot possibly make a living for themselves and their families unless they undertake mass treatment. I know doctors who every day see 50, 60, 100 or 200 panel patients during their brief consulting hours. Under these circumstances it is unavoidable that both doctors and patients are injured. I personally find that I have amply enough to do if during my consulting hours I examine and advise ten or twelve patients."

AUTHOR'S PERSONAL OBSERVATIONS IN
ENGLAND

In my personal studies of the subject in England in 1919, I visited many panel practices and had an opportunity to observe for myself the scant consideration given to the actual needs of the patient for a thorough preliminary examination to justify a definite diagnosis.

According to Dr. Alfred Cox of the British Medical Association, "the facts given and the tendencies shown make it certain that there is a real public danger in most countries, due to the oversupply of doctors, and that if it be not checked the medical organizations are likely to find themselves powerless to exercise any control over methods of practice, over professional ethics, or standards of remuneration. The danger, of course, applies to every profession, as since the war an increasing proportion of young people have been educated to a higher standard than before, and they look to the professions as their natural means of making a living."

(To be continued)

THE LURE OF MEDICAL HISTORY*

BUBONIC PLAGUE CONTROL IN CALIFORNIA
IN 1903†

ORIGIN OF RATPROOFING AS A CONTROL MEASURE

By RUPERT BLUE, M. D., D. P. H.
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IN 1903 a new method of plague control was adopted by the health authorities in San Francisco. This action was deemed advisable because no appreciable effect had been made upon the progress of the disease by the use of the ordinary control measures. Moreover, it was believed that certain advances had been made in the study of epidemiology which justified the change, though these advances had not been generally accepted at the time.

It will be recalled that prior to 1903 antiplague work was based upon the theory of direct transmission from man to man, and the old method of combating disease by disinfection, isolation and quarantine was employed wherever human cases occurred. Furthermore, the rôle assigned to the rat in the spread of the disease had not been approved, nor had the insect transmission from rat to rat been demonstrated. In fact, it was denied as late as 1905 by observers who had failed to convey the infection by the use of biting insects.

Although Gauthier and Raybaud asserted as early as 1902 that certain fleas removed from rats readily feed upon man under experimental conditions, the consensus of scientific opinion was opposed to that view. At any rate, there was much doubt existing among public health workers as to the value of certain epidemiological factors until 1906, when the British Plague Commission published its full report on the work in India.

Notwithstanding this divergence of opinion concerning the mode of transmission of plague, the Federal health officer in San Francisco decided to throw the burden upon the rat, and to base the campaign upon rodent eviction and eradication. Since the old method had failed to influence the course of the disease, it was necessary to devise and put into effect new measures or admit that they were unable to cope with the situation.

It will be seen from the above that the plan called for a reversal of the order of precedence among the factors concerned in the spread of plague. Man was no longer to be held responsible for the crime. In other words, it was a new orientation of the problem whereby isolation and quarantine, if practiced at all, would be applied to the potential rodent carrier.

* A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of CALIFORNIA AND WESTERN MEDICINE. The column is one of the regular features of the Miscellany Department of CALIFORNIA AND WESTERN MEDICINE, and its page number will be found in the front cover index.

† This article was submitted to the editor of CALIFORNIA AND WESTERN MEDICINE several years ago, when Surgeon-General Blue was on detail at Los Angeles, to aid in securing the passage of a rat-proofing building ordinance. It is printed in the Lure of Medical History department because of its historical and other value.

In planning the new campaign, it was realized that the eradicability of plague had not been demonstrated anywhere unless the disappearance of the disease in Honolulu, following the destruction of a part of the city by fire in 1900 could be called a demonstration. Obviously it could not be so considered in view of the fact that the occurrence was more or less accidental and not intended as a health measure. In any analysis of the situation, there could be no doubt that a failure to obtain satisfactory results under the proposed system would subject its sponsors to severe public criticism, particularly as the proposed work would involve considerable expense to property owners.

Surveys of the infected area revealed shocking insanitary conditions. Owing to defective construction, neglect of repairs, and general decay, most of the buildings occupied by both whites and Chinese in the Asiatic quarter were heavily infested with the Norway and other species of rodents. Large colonies of these rats could be found in the cellars and basements, as well as the double walls and ceilings of the structures. To make matters worse, overcrowding of human habitations, especially of basements and underground places, was the rule. Under the prevailing conditions as regards garbage and refuse, it was not to be wondered at that the rat population had taken possession and assumed privileges not usually accorded outside of Oriental cities.

The program provided for the breaking up of these relations, the prevention of breeding and colonizing by the removal of harborages whether existing in residence, foodstore or stable. The purpose of the campaign, therefore, was twofold; first, to separate man from rats; and second, to deprive the latter of their food and shelter. Trapping operations were instituted and systematized with a view to locating infected foci, and, further, for the purpose of reducing the rat population in adjacent districts. Chemical and biological poisons were distributed in the hope of destroying as many rodents as possible. However, the use of bacterial "viruses" was only a partial success and was discontinued because of possible danger to public health.

* * *

In order to secure the results desired it was necessary to obtain the approval of the Board of Supervisors and the support of the mercantile associations of the city and county.

On February 6, 1904, a conference was held in the offices of the Merchants' Joint Committee for the purpose of arriving at a definite conclusion regarding future coöperative work. The conference was attended by representatives of the Federal, State and City health authorities, the Board of Supervisors and the mercantile associations. It is of interest to note the attendance of the latter in view of the strenuous opposition that had formerly characterized their actions with regard to plague.

The following resolutions were unanimously adopted as the records fully show:

"Resolved, That it is the sense of this meeting that the sanitary measures adopted by the City, State and Federal health authorities in February, 1903, for the eradication of contagious diseases in Chinatown be continued for so long a time as may be considered necessary; that the City Board of Health be requested to recommend to the Board of Supervisors additional measures for the destruction of rats.

"Resolved, That all cellars, basements and underground places in the district between California and Pacific, Stockton and Kearny streets, be condemned as places of abode, and the same be destroyed; that in case of reconstruction, the owners be required to remove surface soil, and to concrete the areas thus exposed solidly from wall to wall.

"Resolved further, That the work be performed under the direction and supervision of the Public Health and Marine Hospital Service, etc."

The second resolution carries the first legislation for ratproofing, as a defense against plague, of which there is any available record. Although the language used apparently limits the scope of its usefulness, it can be stated that no difficulty was experienced in securing the widest possible application in the infected area. Under the authority therein granted, many insanitary structures were demolished and removed, and all wooden basements and floors found in twenty-two city blocks were destroyed.

The plan of 1903, referred to in the first resolution, and which contained the same provisions mentioned in the second, was signed by Dr. A. P. O'Brien, City Health Officer, and Dr. William Hassler, Chief Sanitary Inspector, and Dr. Rupert Blue for the Federal Service. The late Dr. Donald Currie, also of the Federal Service, was the bacteriologist on duty in the plague laboratory at the time.

It will be observed that although new officers had been appointed to both state and city boards of health, no change was made in the original plan of 1903, at the conference above mentioned. Of interest also is the fact that the Board of Supervisors and the Merchants' Association were represented in 1904.

Among the officials who affixed their signatures were the following: Martin Regensburger, president of the State Board; Rupert Blue, for the Federal Service; James W. Ward, president of the City Board; N. K. Foster, secretary of the State Health Board; A. A. D'Ancona, for the Board of Supervisors, and William Hassler, chief inspecting physician for the city. It is worthy of remark here that the latter continued his connection with the San Francisco Department of Health for many years and up to the time of his death was its chief executive officer.

* * *

In compliance with the terms of the agreement, the work was continued until February, 1905, although no plague infection in man or rodent had been observed for a period of fourteen months. As showing its value as a preventive measure, it may be stated that no human cases occurred in San Francisco until the summer of 1907, one year after the fire and earthquake.

That outbreak afforded an opportunity for a more general application of the method by reason of the fact that ten of the fifteen city districts had been invaded by epizootic plague. During the course of this work (1907-08) observations were made and materials gathered with a view to improving the technique, and of adding new features for future studies. Several new features were added, only one of which need be mentioned in this paper.

In the course of the epidemic cases appeared among the refugees of the great fire, who had been housed by the city in cottages on the public squares. These cottages rested upon the ground without intervening spaces between the floors and the soil, thereby affording excellent harborage to rats. The usual methods of getting rid of infection were employed but without success. Finally the cottages were raised eighteen inches from the ground, and no further cases occurred. This experience gave rise to a form of ratproofing which, for lack of a better title, has been called ratproofing by elevation. It is a modified form adapted to the construction of cheap frame buildings for suburban districts.

• • •

Ratproofing may be defined as a method of insulating structures against the ingress and egress of rodents. It is necessary because of the general use of wood as building material in this country, as well as because of certain forms of construction, both of which lend themselves to the harboring of rats. If concrete could be substituted for wood on ground areas, and if hollow walls could be sealed from below, the rodent menace would be brought under control. At all events, building ordinances should be based upon a knowledge of the habits of our common rodent species. A retaining wall of concrete extending entirely around a building, eighteen inches below and twelve inches above the ground, will protect it against the burrowing rat, and wire screens of the proper mesh, placed over ventilators and low windows, will exclude the climbing species.

• • •

In those days nobody knew anything about fleas, the intermediary agents in the dissemination of plague. The subject apparently had not merited scientific investigation up to that time. Books on entomology had nothing to offer as to bionomics or the distribution of species which factors seemed important in view of the rôle assigned to insects as vectors of disease. In order to cover this field, and to obtain information of value, a student of entomology of the University of California was employed and put to work in the laboratory. A flea survey was made of San Francisco, specimens removed from live rats were identified as to species and much useful data were collected. It was shown that *X. Cheopis*, the plague flea of India, as described by the British Plague Commission, was one of the common species found in San Francisco; *C. fasciatus*, however, predominated throughout all seasons of the

year. Both fleas should be considered as important factors in the spread of plague infection from rat to rat and from rat to man.*

United States Public Health Service,
Washington, D. C.

* References to articles and items on bubonic plague control, which have been printed in *CALIFORNIA AND WESTERN MEDICINE* in recent years, follow:

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5. 36:69, second column, first item; and 36:70, first column, first item (January), 1932.
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 8. 36:301, second column, first two items; 36:302, first column, first item (April), 1932.
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CLINICAL NOTES AND CASE REPORTS

PRIMARY CARCINOMA OF THE LUNG WITH UNUSUAL MANIFESTATIONS*

By GREGORY G. FLORIDIS, M. D.
CHARLES E. NIXON, M. D.
H. M. GINSBURG, M. D.

Fresno

THAT primary carcinoma of the lung is definitely on the increase is amply proved by clinical and postmortem studies during the last three decades. While older statistics, quoted by Fried¹ show an incidence of less than 0.2 per cent, more recent reports² demonstrate that primary carcinoma of the lung is responsible for from 5 to 10 per cent of all deaths from cancer.

The object in presenting this case study is to emphasize the peculiar manifestations under which primary carcinoma of the lung may mask itself. While our acuity in the diagnosis of this malignancy has increased extensively, still many an expert clinician admits that it presents a baffling problem. Over 80 per cent of Fishberg's³ patients entered his clinic with diagnoses other than lung tumor. Since this growth exhibits a very vigorous and early metastatic power in about 75 per cent of the cases,⁴ it is evident that the clinician has two different pictures to keep in mind: the typical form, wherein there are localizing symptoms to the chest, and an atypical one where the symptomatology is referable entirely to the metastatic

* Case in General Hospital of Fresno County.

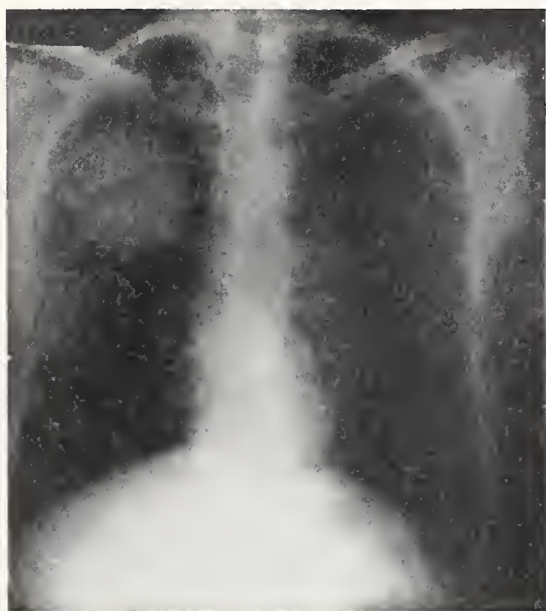


Fig. 1.—X-ray plate of chest, July 19, 1932, showing opacity in upper right lung field.

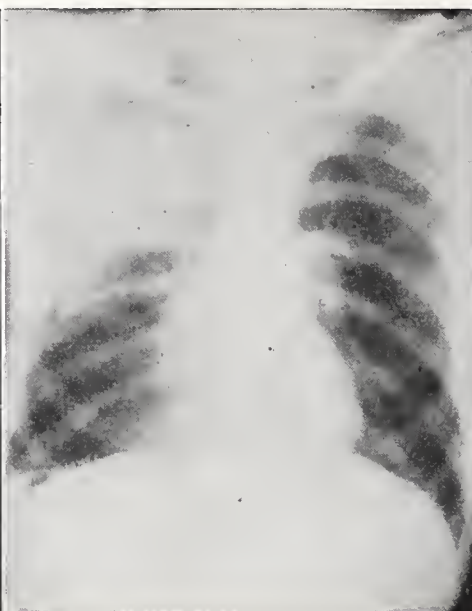


Fig. 2.—Chest plate, October 24, 1932, showing advance of lesion.



Fig. 3.—X-ray of left middle finger, August 2, 1932, showing defect (metastasis) of middle phalanx and periostitis.

involvement. It is interesting that our patient presented neither one of the above clinical syndromes, but that he complained of secondary pulmonary osteo-arthritic changes in his fingers. Many reports in the literature on this subject fail to mention such findings. In a review of the frequency of the different symptoms and signs of primary carcinoma of the lung, the California Medical Association Cancer Commission cites them as being 25 per cent. Other symptoms are as follows: cough, 90 per cent; pain, fever, dyspnea, 53 per cent; cyanosis, 50 per cent; hemoptysis, 40 per cent; effusion, 50 per cent; loss of weight, 35 per cent; clubbing of fingers, 25 per cent; cavitation, 14 per cent; and stridor.

M. Fishberg³ claims an early clinical diagnosis can be made if we bear in mind that the disease manifests itself in three forms:

One, the pulmonary form, simulating tuberculosis;

Two, the pleural form, simulating pleurisy, dry or with serous, sanguineous, or purulent effusions;

Three, the excavating form, simulating abscess and gangrene of the lung.

Polerski⁷ emphasizes the following characteristic physical findings:

High position of the diaphragm on the affected side;

Paradoxical respiration with a see-saw movement of the diaphragm;

Pendulum movement of the heart;

Infraclavicular flatness fusing with cardiac dullness.

Our interest in our own patient arose from the fact that he had nonlocalizing symptoms in the chest. The secondary pulmonary osteo-arthritic changes of the fingers and toes, and the marked degree of periostitis of the long bones, with their accompanying severe pain and tenderness, presented a very misleading clinical entity. A very similar case was presented in 1926 by H. Brunn.⁶

Rogers,⁸ in his series of fifty cases of primary carcinoma of the lung, states that 44 per cent of his patients gave as their first symptoms one that was not connected with the chest, and that 12 per cent went through the entire course of the illness without a pulmonary symptom.

REPORT OF CASE

History.—T. B., age forty-seven, an Armenian farmer, was admitted to the Medical Service of the Fresno County Hospital on July 7, 1932. The only complaint at that time was pain in the finger-joints, with moderate tenderness and swelling.

It was difficult to obtain a detailed history, as the patient's command of the English language was very limited. The onset of the disease was ushered in five months previously with multiple joint involvement, settling finally in the interphalangeal joints. The pain in these joints had so progressed that the patient became bedridden the last four months of his illness. He was unable to feed himself, and even the slight touch of bedcovers would bring forth an outcry of pain.

Past history was of no import, the patient enjoying very good health up to the onset of the present illness. Family history was irrelevant.

Physical Examination.—The most striking observation at first sight was a marked degree of clubbing of both fingers and, to a lesser degree, of the toes.



Fig. 4.—Photograph of fingers showing clubbing and the metastatic lesion of finger.

Inspection revealed a fairly emaciated, middle-aged man, sitting in bed, and holding his swollen fingers in front for protection. The temperature was 99.6 degrees. Respiration, 20. The pupils were equal, and reacted to both light and accommodation. All teeth were absent (removed on advice of former physician for "arthritis"). The supra- and infraclavicular fossae were prominent. No limitation of thoracic breathing was noted. The diaphragmatic excursion on both sides was of normal range. No changes were noted in the vocal fremitus. There was questionable dullness and somewhat diminished breath sounds over the right infraclavicular region. No râles were present. The area of cardiac dullness was of normal position and size. The heart sounds were distant and scarcely audible. No murmurs were present. The pulse was 88. The blood pressure was 120/70.

The abdomen presented a peculiar formation of cicatricial tissue due to a previous skin infection of undetermined etiology. No abnormal masses were palpable. No tenderness or deformity of the spine was noted. Moderate hyperesthesia of all extremities and marked clubbing of both fingers and toes, with swelling and tenderness of the interphalangeal joints. There were no abnormal reflexes elicited. Rectal examination revealed good sphincter tone with no prostatic enlargement.

Laboratory Findings.—Blood: hemoglobin, 67 per cent; red blood cells, 3,680,000; white cells, 5,850. The urinalysis was repeatedly negative. The sputum examinations were negative for acid-fast bacilli, elastic fibers, and abnormal cells. Repeated blood cultures were negative. A mantoux using 1 milligram gave a negative reaction. Blood, spinal and provocative Wassermanns were negative. The spinal fluid was clear, under no increased pressure and no pleocytosis.

Roentgenograms.—It was purely of academic interest alone that a roentgenogram of the chest was ordered because of the secondary pulmonary osteopathic changes noted in the fingers. Much to our surprise, a circular dense area was revealed occupying the right upper lobe in the periphery. Figures 1 and 2 demonstrate the progress of the lesion during the patient's five months' stay in the hospital.

There were diversified opinions among us as to the interpretation of the first chest plate. The following diagnoses were considered: Pulmonary abscess; neoplasm (primary or secondary), foreign body reaction, and echinococcus cyst. At this time x-ray studies of the extremities revealed secondary pulmonary hypertrophic osteo-arthritis, namely, a marked periostitis of the long bones and well-defined spurring of the interphalangeal joints. Figure 3 shows a view of the middle finger of the left hand, demonstrating the hypertrophic bony and periosteal changes as well as a small area of decalcification of the middle phalanx. We now strongly suspected malignancy with metastasis, and had a readily accessible area for biopsy study. Roentgenographs of the spine, pelvis, skull and other extremities failed to reveal any evidence of further metastasis. Other diagnostic procedures employed were: artificial pneumothoraces, bronchoscopic examinations, fluoroscopic studies, and aspiration of the tumor mass. All gave negative findings. An exploratory needle with a hooked end was used successfully in securing small bits of the tumor mass. An intubator attached to a high frequency current was used in the tract to secure hemostasis.

Course.—Hospitalization extended to approximately five months. The patient's symptoms progressively became worse. Pain and tenderness gradually involved the right shoulder joint and chest. The appetite grew poorer every day. Emaciation was becoming marked. It is remarkable that even in advanced stages the patient had no cough, expectoration, hemoptysis

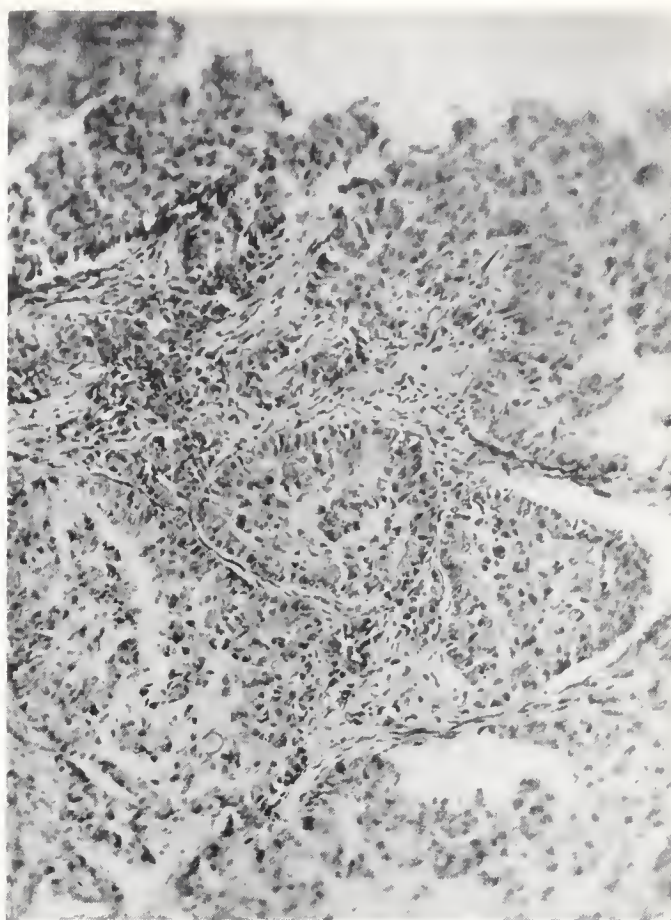


Fig. 5.—Microphotograph of section of biopsy from finger.

or dyspnea; in fact, the only localizing subjective symptom was intractable pain in the right chest radiating to the shoulder on the same side. The frequent use of opiates was necessitated in the late stages. The affected finger had to be amputated due to enlargement. Metastatic subcutaneous nodules now made their appearance over the right axilla.

The patient died on November 27, 1932, following a progressive loss of weight, cachexia, and marked pain. Surgical interference was not considered, because of the early metastatic phenomena. An autopsy was performed, which verified the clinical diagnosis of a primary carcinoma of the lung.

COMMENT

We are in full accord with M. Fishberg's statement that clubbed fingers appearing in a patient of middle age should urge careful examination of the lungs for tumor.

General Hospital of Fresno.

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COARCTATION OF THE AORTA, ANOMALOUS CORONARY ARTERY AND PATENT DUCTUS ARTERIOSUS*

REPORT OF CASE WITH SUBACUTE BACTERIAL ENDOCARDITIS, SHOWING MYCOTIC ANEURYSMS OF THE AORTA AND SUPERIOR MESENTERIC ARTERY

By FREDERICK KELLOGG, M. D.

AND

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THE diagnosis of coarctation of the aorta has been made more frequently since the appearance of Abbott's¹ and Blackford's² excellent articles. In 1928 Abbott was able to collect two hundred cases of coarctation of the aorta which were found at autopsy. Twenty-one of these were recognized clinically.

The signs of coarctation of the aorta are mainly vascular. The cardiac findings, which are often present, are an enlargement of the left ventricle (secondary to the hypertension in the upper body), and a systolic murmur along the left sternal border. This murmur is usually maximal in the back between the scapulae. The chief vascular finding is a change in tension and form of the pulse in the upper body as compared with the lower. In fact, Abbott states, "A diminished blood pressure in the lower extremities, with retardation and diminution or complete absence of the femoral pulse in the presence of a contrasting hypertension in the upper extremities, and a hard, full radial pulse is in itself ground for a provisional diagnosis." The second characteristic vascular sign is the evidence of collateral arterial circulation over the chest. Roentgenologic examination may show scalloped rib margins (a sequel of the hypertension and collateral circulation in the intercostal arteries), or abnormal pulsation of the ascending aorta, as compared with an undemonstrable or only slightly pulsating descending aorta.

Three times as many cases of coarctation are found in men as in women. Death is most apt to occur in adolescence or in early middle life. In their order of importance, death most commonly results from myocardial failure, rupture of the heart or aorta, cerebral hemorrhage, or mycotic endarteritis.

In the following case, coarctation was not recognized until a week before death.

REPORT OF CASE

W. S., a sixteen-year-old white, single, schoolboy entered the University of California Hospital on the Surgical Service on June 29, 1932, complaining of abdominal pain. When the patient was four years old he had an appendectomy with drainage because of a ruptured appendix. Since that time he had had occasional abdominal distress, accompanied by eructations of gas. When he was six years old he had measles complicated by otitis media, followed by inter-

mittent attacks of otorrhea. When he was twelve years old, reddish urine was noted for a short time.

A year before his entry he was ill for two weeks with "pneumonia." Following this his abdominal symptoms increased in severity and he began to notice dyspnea and easy fatigability on exertion. Two weeks before entry he was in bed several days with fever and generalized aching. He then began to have constant, aching, nonradiating epigastric pain, lasting five days. The pain was accompanied by nausea, but not by vomiting, until two days before entry, when he vomited, several hours afterward, the food eaten at breakfast. This was followed by severe, generalized abdominal colic which persisted to the time of entry. There was no constipation.

Physical Examination.—Physical examination at entry showed a pale, slender boy, who thrashed about in bed complaining of severe abdominal pain. The temperature, pulse rate, and respiratory rate were normal. The tongue was heavily coated. The tonsils were moderately enlarged and cryptic. The heart showed no signs of enlargement; the aortic second sound was accentuated; and a loud systolic murmur was heard over the precordium. The brachial blood pressure was 140 systolic, 80 diastolic. The abdomen was tense, but there was no distention, spasm or localized tenderness. Peristalsis was audible throughout.

An examination of his blood revealed 68 per cent hemoglobin (Sahli), 3,900,000 erythrocytes and 14,000 leukocytes per cubic millimeter, with a differential of 80 per cent polymorphonuclear cells. The urine contained acetone and a faint trace of albumin. The centrifugalized urinary sediment showed, per high dry field, five to six white cells, five epithelial cells, fifteen

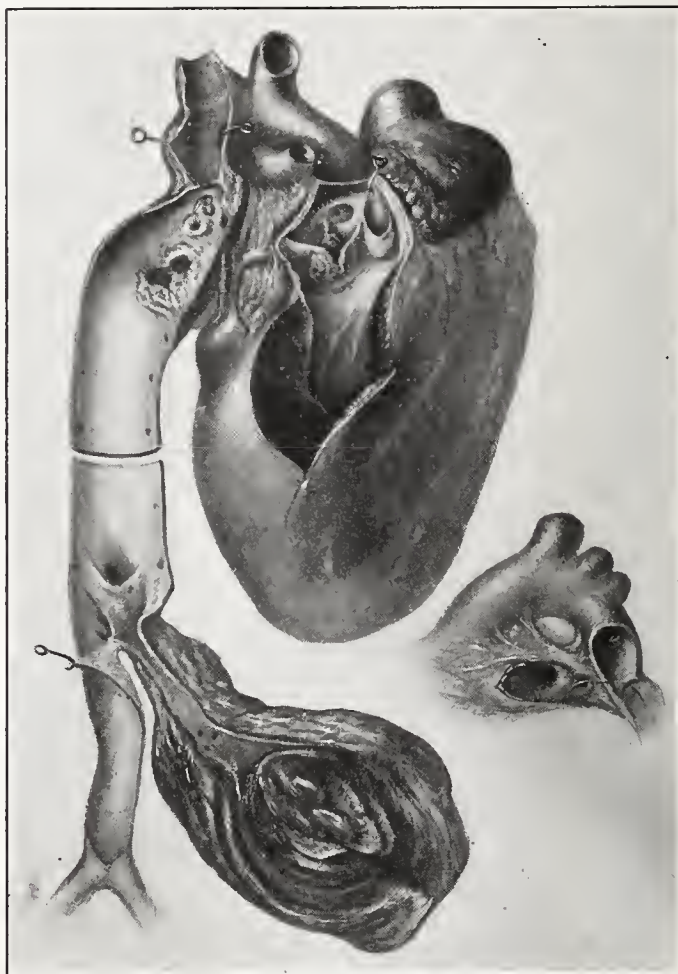


Fig. 1.—Drawing of heart, aorta and superior mesenteric artery. The vegetations on the aortic leaflets, the ruptured aortic valve, the bifid coronary mouth, the coarctation of the aorta, the patent ductus arteriosus, the mycotic aneurysm of the aorta and the mycotic aneurysm of the superior mesenteric artery are illustrated. The inset shows a bristle in the patent ductus arteriosus. The same bristle emerges from the ductus arteriosus just below the coarctation in the main figure.

* From the divisions of medicine and pathology, University of California Medical School, San Francisco.

to twenty red cells, and one to two granular cellular and hyaline casts. The Wassermann reaction on the blood was negative.

Diagnosis and Treatment.—A diagnosis of partial intestinal obstruction was made and an exploratory laparotomy was performed the day of entry. Some peritoneal adhesions were found and freed, but a definite intestinal obstruction was not present. A fusiform swelling, approximately two centimeters in diameter, showing expansile pulsations, was seen in the region of the superior mesenteric artery. This was thought to be an aneurysm. Numerous enlarged lymph nodes were present in the mesentery.

Following the operation, the patient continued to have occasional attacks of generalized abdominal pain. The phenolsulphonephthalein excretion, the Mosenthal test, and the non-protein-nitrogen and creatinin determinations in the blood were within normal limits. The Wassermann reaction on the spinal fluid was negative. The urinary findings and leukocytosis continued as on entry, and the anemia became more marked. X-ray films of the renal regions showed no evidence of stone. A tentative diagnosis of subacute glomerular nephritis was made.

An examination eight days after entry showed no change in the size of the heart; the brachial blood pressure was 185 systolic, 105 diastolic. A loud systolic murmur was heard anteriorly in the third left interspace which was transmitted to the neck, left axilla, and back. This was thought to indicate a congenital cardiac lesion.

Three weeks after entry the patient was transferred to the Medical Service. At this time a diastolic murmur was heard to the left of the sternum in the third and fourth interspaces. The brachial blood pressure was 150 systolic, 60 diastolic. The next day definite aortic systolic and diastolic murmurs were heard, and a to-and-fro murmur was present over the pulmonic area. A very loud, rough, systolic murmur was heard over the posterior thorax, maximal along the spine. Slightly enlarged, tortuous, transverse scapular arteries could be easily felt. The radial pulse was Corrigan in type, and a pistol-shot sound could be heard over the brachial artery, but not over the femoral. Pulsation in the dorsalis pedis and internal malleolar arteries was imperceptible. The brachial blood pressure was 160 systolic, 25 diastolic; the femoral was 85 systolic, 70 diastolic.

Because of these findings, a diagnosis of coarctation of the aorta, aortic regurgitation, and probable patent ductus arteriosus was made. As a subacute bacterial endocarditis could explain the anemia, leukocytosis, urinary findings and the changing cardiac signs, cultures of the blood were taken from which *Streptococcus alpha* was obtained. The same organism predominated in a culture of the throat and was also found in the urine. A urea-clearance test was within normal limits.

X-ray films and fluoroscopy of the chest were normal, save that the aorta could not be traced beyond the transverse arch, though the vessels in the upper mediastinum pulsed abnormally. The rib margins were not scalloped. An electrocardiogram showed an intraventricular block and a right axis deviation. Simultaneous pulse tracings showed that the pulsation of the radial artery preceded that of the femoral (normally, the femoral pulsation precedes the radial).

The patient's temperature, heretofore practically normal, now became moderately elevated, and remained so until death. The arms continued to show a high pulse pressure with low diastolic pressure, and the legs a low pulse pressure with relatively high diastolic pressure. Dyspnea and orthopnea now appeared, soon followed by pulmonary edema and then a right pleural effusion. On the day of death a gallop rhythm and a pericardial friction rub were heard. The spleen was palpated for the first time, and the edge of the liver was found to be four centimeters below the right

costal margin. He died of cardiac failure a month after entry. No petechiae were noted at any time.

The clinical diagnosis was coarctation of the aorta, patent ductus arteriosus, subacute bacterial endocarditis, rupture of the aortic valve with consequent cardiac failure and focal glomerular nephritis. The abdominal aneurysm was thought to be congenital.

Postmortem Findings.—Postmortem examination (performed three hours after death): In the conjunctiva of the lower left eyelid were two petechial hemorrhages. There was slight clubbing of the fingers of the right hand. The recent lower right rectus operative scar had a central granulating zone.

The peritoneal cavity contained a slightly increased amount of dark, straw-colored fluid, and in the right lower quadrant the peritoneum was iced over by a recent fibrinous exudate. Each pleural cavity contained 250 cubic centimeters of a light, straw-colored fluid. The pericardial sac, likewise, contained an increased amount of clear, straw-colored fluid. An old, thin, fibrous band joined the epicardium and pericardium at the apex.

The heart weighed 400 grams. The left ventricle was hypertrophied, having a maximum thickness of 1.7 centimeters. The aortic valve was partially destroyed by a large, crumbling vegetation, and appeared to be composed of two leaflets. The right cusp and the posterior cusp were fixed together by the vegetation, which had destroyed their common attachment. A portion of the right cusp had been torn out of this fibrinous mass. An anomalous bifid coronary artery was situated behind this cusp.

The aorta was constricted in an hour-glass fashion by a firm, white band 2 centimeters below the root of the left subclavian artery. This band, causing a coarctation, was less than 1 millimeter in thickness. Immediately distal to it the intima was puckered around a small perforation, through which a bristle could be passed into the pulmonary artery. This was the remnant of the ductus Botalli, which was anatomically open but functionally closed. Measurements of the circumference of the aorta were 1.9 centimeters at the bifurcation, 3 centimeters at the level of the superior mesenteric artery, 4 centimeters at a point 2 centimeters below the coarctation, 1.9 centimeters at the coarctation, and 2.8 centimeters at the root of the left subclavian artery. There were numerous large, irregular vegetations and small aneurysmal dilatations of a mycotic nature distal to the coarctation.

The branches of the arch of the aorta were normal in number and location, but were slightly larger than normal in size. The intima of this portion of the aorta showed a few yellowish, atheromatous streaks. At a point 5.5 centimeters from the aorta the superior mesenteric artery dilated to form a fusiform mass measuring 6 x 5 x 4 centimeters, situated in the mesentery of the small bowel. The walls of the artery were greatly thickened and held a laminated thrombus in the lumen. The vessel could not be traced beyond the aneurysm. The internal mammary arteries were larger than normal, but their anastomoses with the intercostal arteries were not unusual. The heart, aorta, and superior mesenteric aneurysm are shown in Figure 1.

The spleen weighed 550 grams, was soft in consistency and contained several small, firm, white, embolic abscesses. Each kidney was enlarged, showing purple petechiae beneath the capsule, and on section this "flea-bitten" appearance was still more striking.

Microscopic Findings.—The aortic vegetations were composed of clumps of Gram-positive organisms surrounded by dense fibrin. The mycotic aneurysms of the aorta showed a dense, infected, granulation tissue. The aneurysm of the superior mesenteric artery was similar, save that an organized and canalized thrombus was also present. The sections of the lung were examined for the changes usually ascribed to rheumatic

fever;³ but none could be found. A recent terminal bronchopneumonia was present. The serosa of the jejunum was covered by a recently organized fibrinous exudate. The spleen showed numerous infected embolic abscesses situated in an acute, gray, splenic tumor. The typical picture of an acute focal glomerulonephritis was present in the kidneys.

Pathological Diagnosis

- I. Congenital heart disease.
 1. Coarctation of the aorta.
 2. Anatomically patent ductus arteriosus.
 3. Bifid mouth of right coronary artery.
 4. Left ventricular cardiac hypertrophy.
- II.
 1. Subacute bacterial endocarditis (*Streptococcus alpha*), involving the aortic valve with rupture of the right cusp.
 2. Mycotic aneurysm of descending thoracic aorta.
 3. Mycotic aneurysm of superior mesenteric artery.
 4. Acute focal glomerulonephritis.
 5. Acute gray, splenic tumor with embolic abscesses.
 6. Passive congestion of the viscera and bilateral pleural effusion.
- III. Old localized adhesive pericarditis.
- IV. Recent localized peritonitis.
- V. Terminal bronchopneumonia.

COMMENT

The incidence of bacterial endocarditis in a congenitally malformed heart is quite high. In this instance the oldest lesions appeared to be in the thoracic aorta near the coarctation, followed by involvement of the superior mesenteric artery and then the aortic valve. The onset of the infectious process probably occurred a year before entry when the patient was said to have had pneumonia. The process was fairly quiescent up to the onset of the symptoms before entry, and then became more fulminating. Death, however, was due to cardiac failure rather than to sepsis. Distortion and rupture of the aortic valve imposed too great a strain on an already overburdened cardiac muscle.

The symptoms during the terminal stages of the disease were difficult to interpret, and several diagnoses were considered before the correct one was reached. The first diagnosis of intestinal obstruction was based on the history of a ruptured appendix in childhood, and the abdominal colic and the vomiting. When the abdominal aneurysm was found, the blood and spinal fluid were examined to rule out syphilis. Acute hemorrhagic nephritis was next considered because of the hypertension, anemia, and hematuria. Finally, the probability of congenital heart disease with coarctation of the aorta was recognized, and the complication of subacute bacterial endocarditis suspected and confirmed by culture of the blood.

The coarctation was diagnosed because the arteries of the upper extremities showed hypertension and a high pulse pressure, as contrasted with a hypotension and low pulse pressure of the arteries of the lower extremities. Furthermore, the enlarged, tortuous, transverse scapular arteries were evidence of collateral circulation. The lack of scalloped rib margins in the x-ray films is not

unusual at this age, as apparently only in older individuals who have had coarctation for a longer time does this sign appear. Likewise, the early arteriosclerotic changes found in the aorta would have advanced with time.

In the presence of hypertension in a young individual, coarctation of the aorta should always be considered, and the character of arterial pulsations in the lower extremities noted.

SUMMARY

1. A case of coarctation of the aorta with subacute bacterial endocarditis producing mycotic aneurysms of the aorta and the superior mesenteric artery is reported. The symptoms resulting from the aneurysm of the superior mesenteric artery simulated acute intestinal obstruction and a laparotomy was performed. The urinary findings actually due to the bacterial endocarditis led to a tentative diagnosis of acute hemorrhagic nephritis.

2. Coarctation was finally recognized because of the marked difference in arterial pulsations in the upper and lower extremities, and because of evidence of collateral arterial circulation.

3. The rapidly changing cardiac murmurs, anemia and hematuria led to the diagnosis of the complicating subacute bacterial endocarditis.

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SOME NEW INSTRUMENTS AND MODIFICATIONS

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FIGURE ONE.—One of the inconveniences of working in the vaginal canal has been the interference with vision by the handles of the several instruments used. In nose and throat work some of this has been obviated to a great extent by the development of the "bayonet" forceps.

In Figure 1 is shown a view of the ordinary cervical tenaculum, to which this principle has been applied. Its advantages are those of increasing the visibility of the operating field in that the handles, and incidentally the assistant's hands, are out of the field of vision; and secondly, that when one engages the cervix on each side, the increased leverage due to the angulation of the instruments brings the cervix down into the lower vaginal segment with greater ease and gentleness, that is, with less direct tractive force.

1 1 1

Figure 2.—As a victim of three laparotomies, my memories have always been lacerated by the thoughts of the unconscious brutality of the usual silkworm-gut retention sutures—with their tend-

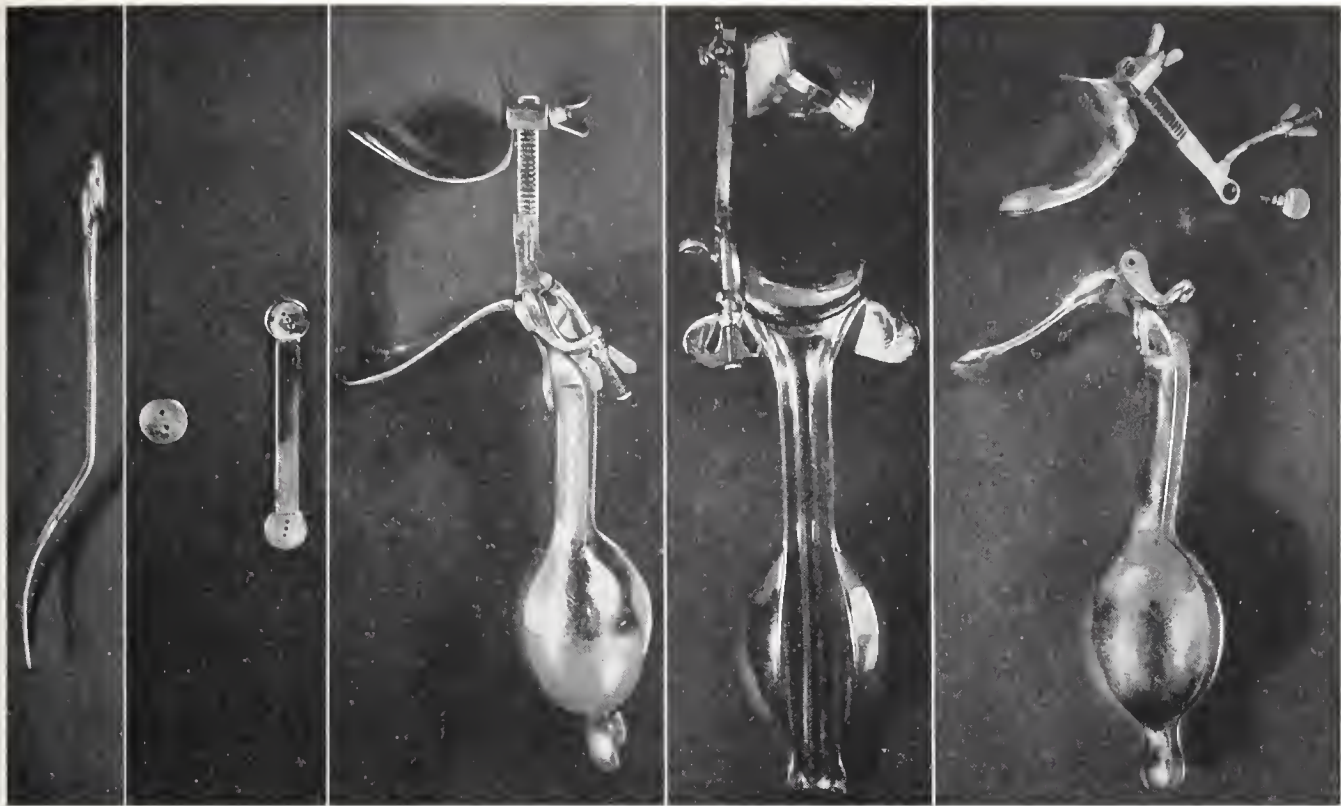


Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

ency to cut into the tissues whenever any distention supervened—and the attendant pain.

Buttons have been used before, as has rubber tubing; but most buttons have sharp edges which turn inward and downward, and they also slip along the skin.

Figure 2 shows a button devised by us, and also the same fused to each end of a hollow, flat bar. The buttons are of a size between that of a quarter and a half-dollar; they are about two and one-half millimeters thick, and are bi-concave, so that they produce a sort of suction upon the surface of the skin; the edges are rolled, or rounded, so that they will not cut, even though they should become inverted a bit; and the holes are bevelled to prevent cutting of the braided silk we use when it is under tension.

When retention sutures are required, we use heavy braided silk, and they are so threaded through the buttons, or button-bar, that all the silk, except that which ties over the button or is looped over them, or through the hollow bar, is beneath the skin surface and thus cannot cut into it, whatever be the tension.

Figure 3 and Figure 4.—Exposure is the prime *sine qua non* of successful operative accomplishment, and anything which will favor that end, while working in the vagina, is greatly to be desired.

A year and a half ago, Kny-Scheerer brought out a new vaginal speculum, called the Schoenbrunn, which was formed according to anatomical contours, and gave finer exposure than the usual straight-bladed bivalve speculum, but which was too short in the blades; and this having only a

very short tail, with a ring in it, had a tendency to slip out and needed to be fastened with a towel-clip or some such device.

Since the blades of this instrument were shaped upon an anatomical background, with contours that had no tendency to injure the tissues, we thought that a combination with the usual weighted speculum might add some advantages which it alone did not possess.

Through the kind assistance of Mr. H. Weniger, an instrument maker in San Francisco, we cut off the small tail of the original speculum, and after cutting off the vaginal blade of a weighted speculum we had the two fused into one, making a combined speculum as shown in Figure 3. It can very readily be seen, therefore, that the amount of exposure is very great (see Figure 4), while the curves of the blades fit the bladder and rectal curves, as well as under the pubes, so as to give a minimum of pressure in any one spot, and trauma.

Occasionally, in a very deep or relaxed vagina the weighted butt must be held out from the table with an inserted pad; but that is an easy accomplishment.

Figure 5 shows the speculum taken apart so that it may be used as an ordinary weighted speculum, with easy accessibility of the parts and very little downward tension upon the rectum.

These instruments, noted above, are not altogether original; they are only modifications and were made for our own experimental use, with the hope that they would assist toward better operative technique and results. So far, in our hands they have all given excellent results, with enhanced ease of procedure.

EYELASH DYEING*

SOME SEVERE EYE AND SYSTEMIC SYMPTOMS
RESULTING THEREFROM

By FRANK H. RODIN, M. D.
San Francisco

RECENTLY a number of cases of dermatitis and severe eye lesions, following the use of eyelash and eyebrow dyes, have been reported. Bab¹ reported the histories of six patients in whom the dyeing of eyelashes and eyebrows with henna was followed by severe conjunctivitis, edema of the lids, blepharospasm, watering of the eyes, painfulness and, in some, even by the development of sties, marginal keratitis, erosions and ulcerations of the cornea and eczema of the brows. Greenbaum² reported a case of dermatconjunctivitis, due to the use of "Lash-Lure," an eyelash and eyebrow dye. Harner³ reported three cases of dermatconjunctivitis due to the use of "Lash-Lure." Two of Harner's patients developed lesions of the corneas. Bourbon⁴ reported a case of severe eye symptoms which followed the dyeing of the eyelashes. Jamieson⁵ reported a case of dermatconjunctivitis, following the use of "Lash-Lure." McCally, Farmer, and Loomis⁶ reported a case of corneal ulcerations, which followed the use of "Lash-Lure." The result was a large dense opacity of the right cornea with the vision limited to light perception; while the left cornea has a less dense opacity of the lower half and sufficient infiltration above to restrict the vision to light perception.

How severe the lesions may be resulting from a dyeing of eyebrows and eyelashes, is well illustrated by the following case, which occurred on our service at the Mount Zion Hospital.

REPORT OF CASE

History.—E. K., a widow, age fifty-three years, was first seen at her home on August 8, 1931. On the previous day she had had her eyebrows and eyelashes dyed at a beauty parlor. Just what the dye was we were unable to ascertain with certainty. Late that afternoon the eyelids became swollen and the swelling greatly increased, so that she was unable to open her eyes and it was necessary for her neighbors to come in and feed her and attend to her needs. In addition to the swelling, she complained of a great deal of pain in the eyes, especially in the right eye. There was uncontrollable itching of the eyelids and face, and the patient complained of feeling very ill.

Fifteen years previously she had bleached her hair with peroxid and ammonia, after which she used a hair dye. This was followed by a tremendous swelling of the scalp, which lasted for three weeks. Six years later a similar procedure produced also identically the same results. She had never had any asthma or other allergic disturbances. However, as a child, she had had a persistent dermatitis of the scalp. Otherwise, her past history was uneventful.

Examination.—When the patient was first seen she appeared extremely ill and in great distress. The examination revealed an extensive dermatitis venenata involving the entire forehead, face and, for a short distance, part of the neck. The skin was considerably swollen and generally reddened with scattered areas of vesiculation. In many places these vesicles had broken, and the raw surface oozed serous fluid. There was a tendency to crust formation in these areas.

* From the department of ophthalmology of the Mount Zion Hospital.

The eyelids were tremendously swollen and the skin here was somewhat thickened. A great deal of mucopurulent discharge was escaping from the conjunctival sacs. The swelling of the lids was so marked that only with a great deal of effort was it possible to separate them in order to view the eyeballs. There was a great deal of edema of the tarsal and bulbar conjunctiva. The swelling of the bulbar conjunctiva was so marked that it partly overhung the corneas. The cornea of the right eye showed some erosions, while the left cornea was intact.

On the following day the patient's condition was worse. There was more itching of the face and she was in great distress. The swelling was more extensive, involving the forehead, the entire face, ears, back and front of neck, and extending over the sternum to the breasts. It also involved the shoulders and the back. The whole face was greatly swollen and the neck was much increased in size. The pharynx was edematous. The scalp was free of lesions. The patient appeared very ill and toxic. The temperature was 38.2 centigrade. She was sent to Mount Zion Hospital.

The blood Wassermann reaction was negative and urinalysis showed, a number of times, a slight trace of sugar.

Treatment and Course.—While in the hospital the patient had a stormy time (Chart 1). The general swelling remained the same for three days (Figs. 1

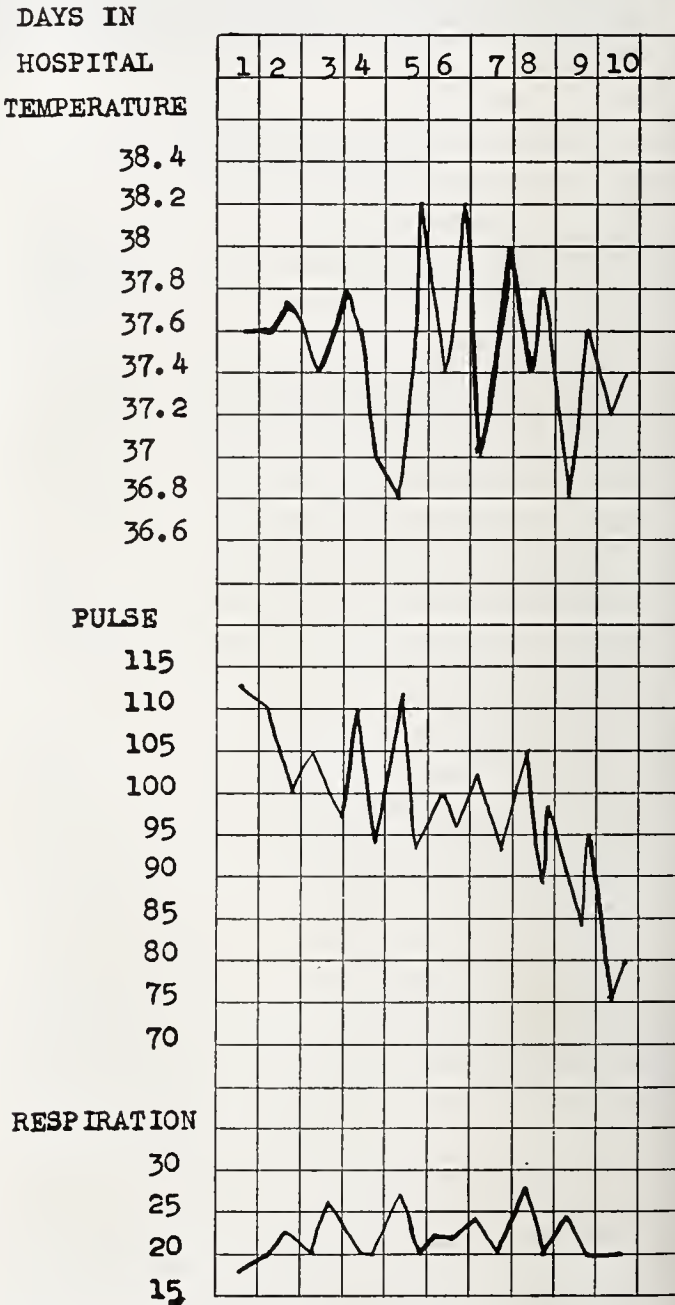


Chart 1.—The temperature, pulse and respiration of the patient during the first ten days' stay at the hospital.

and 2), and then gradually subsided. It was not, however, till five days after admission that the swelling of the eyelids was sufficiently reduced to enable the patient to open her eyelids, and it was eighteen days before the patient's condition improved sufficiently that she was able to be discharged.

Treatment consisted of keeping the conjunctival sacs clean by frequent separation of the eyelids, thus allowing the discharge to escape. The eyes were atropinized and novocain ointment was placed in the conjunctival sacs. White vaselin was applied to the skin and later zinc oxid ointment was used. The pain was controlled by the use of codein and morphin.

When the patient left the hospital the edema of the face and eyelids was practically gone. A number of the eyelashes were missing. The margin of the eyelids appeared as seen in healing ulcerative blepharitis. Many hairs of the eyebrows were gone and others had small abscesses around them.

Later a small localized mass on the lower left eyelid near the outer canthus had to be excised.

Complete cure was not obtained until October 15, ten weeks after the patient first took ill.

COMMENT

Seven cases of dermatconjunctivitis, due to the use of eyelash and eyebrow dyes, have been reported in *The Journal of the American Medical Association* since July, 1933. Some of the patients reported had corneal lesions, and one patient had corneal ulcers resulting in corneal scars with blindness; the final vision obtained was light perception with each eye. In addition to the seven cases men-



Fig. 1.—Front view, showing the extension of the edema. The photograph was taken three days after her admission to the hospital.



Fig. 2.—Side view, showing the extension of the edema.

tioned above, Bab¹ reported the histories of six patients with various eye lesions due to the use of henna in dyeing the eyelashes and eyebrows.

In the present case the outstanding factors were: The marked swelling of the eyelids followed by the edema of the face soon after the application of the dye; the extension of the edema which involved the forehead, eyelids, face, neck and chest to the breasts; the edema of the pharynx and erosions of the right cornea. The symptoms were so severe that hospitalization was necessary, and it was eighteen days before the patient's condition improved sufficiently that she was able to leave the hospital. It was ten weeks after the onset of her illness that a complete cure was obtained.

Just what particular dye was used we could not ascertain with certainty. The possibility of an allergic reaction to the dye has to be considered, in view of the severity of the symptoms and the gradual subsidence of the edema and the swelling of the eyelids. The patient also gave a history of having marked swelling of the scalp twice previously following the dyeing of her hair, fifteen and seven years before.

The danger of dyeing the eyelashes is, therefore, a very serious one, and already has been commented on editorially by *The Journal of the American Medical Association*.⁷

Since writing this paper, Moran reported a case of "Bilateral Necrosis of the Cornea Following the Use of Hair Dye on the Eyebrows and Lashes" (*Journal of the American Medical Association*, 102:286-287, January 27, 1934). A woman, age sixty-six, after using Godefroy French Hair Coloring (Larieuse), which contains paraphenylenediamine, developed necrosis of the corneas, with the result that the vision was reduced to 10/200.

490 Post Street.

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HEALED MILIARY TUBERCULOSIS*

By LLOYD BRYAN, M. D.

AND

JOSEPH LEVITIN, M. D.
San Francisco

MILIARY tuberculosis is considered by many to be a fatal disease. Waters, writing on the subject in "Tice System of Medicine," states that although a few patients are reported to have recovered, there is reason to believe that the diagnosis was not clearly determined. Marlow, however, was able to collect thirty-six cases in the literature with patients reported as healed, to which he added two of his own. Both of his patients were still living, fourteen and twenty-four months, respectively, after the process was diagnosed by the roentgen ray. Additional cases have since been reported by Banyai, whose patient had the disease nine years, and by Meyers-Palgen. The diagnoses were made by roentgen ray and corroborated by positive sputum. Meyers examined a man of fifty years and found a chest filled with miliary shadows; pneumoconiosis was excluded, and the conclusion was reached that the shadows represented a healed miliary tuberculosis.

The case we are reporting is of interest because the disease probably occurred thirty-five years prior to our examination, and the diagnosis was confirmed by autopsy.

* From the department of roentgenology, Mt. Zion Hospital, San Francisco.

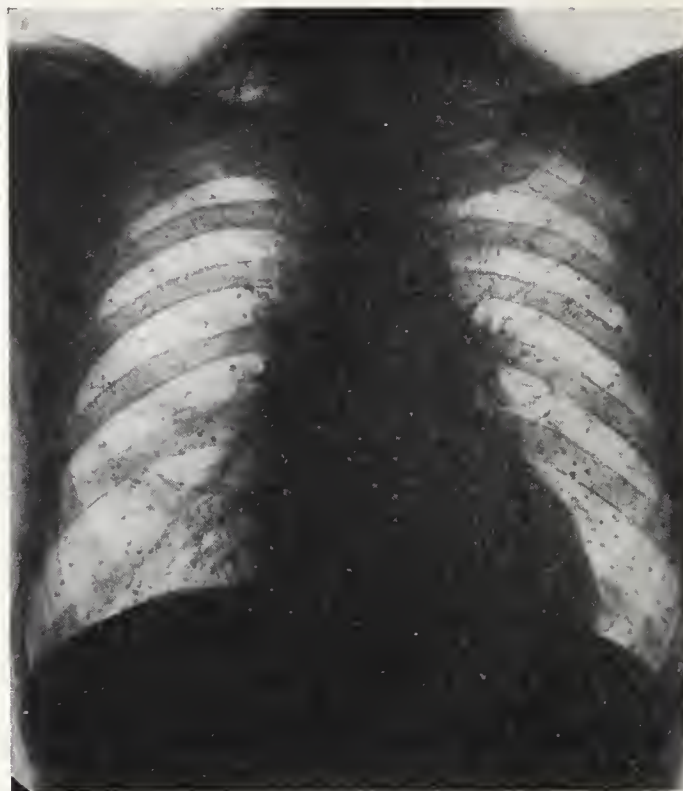


Fig. 1.—Healed miliary tuberculosis.

REPORT OF CASE

M. G., male, age sixty-five, for a few months past noticed increasing difficulty in swallowing. Radiologic examination revealed an obstructive carcinoma of the esophagus. During the examination it was noted that the lung fields were filled with small calcified miliary shadows, approximately of the same size, and less than one-eighth of an inch in diameter, indicating the same age and stage of development.

Reviewing the patient's past history, it may be noted that the only illness of importance was a diagnosis of typhoid fever in 1896. Uncomplicated with meningeal symptoms, miliary tuberculosis can so clinically simulate typhoid fever that it is called by Osler the typhoid form. Considering the prevalence of typhoid fever at that time, and the lack of roentgen-ray examination to diagnose miliary tuberculosis, it is justifiable to assume that the patient had a mistaken diagnosis made of typhoid fever.

The patient's death followed a gastrostomy for the esophageal obstruction. Postmortem examination of the lungs by Dr. G. Y. Rusk showed both lungs to be peppered with small nodules all about the same size. Many of them were calcified. Microscopic examination of the uncalcified nodules showed areas of necrosis surrounded by a lymphocytic infiltration, among which were occasional giant cells. The postmortem diagnosis was "healed miliary tuberculosis." No evidence of tuberculosis was found in the other organs.

COMMENT

1. A case is presented of a healed miliary tuberculosis of the lungs.

2. Diagnosis made by roentgen ray was confirmed at postmortem.

3. A small percentage of the lesions were calcified. Only the calcified lesions were seen on the chest film. All were of approximately the same size.

4. Onset of the disease was thirty-five years ago.

2200 Post Street.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

NAUSEA OF PREGNANCY

H. A. STEPHENSON, M. D. (490 Post Street, San Francisco).—*Etiology.* At least one-half of all pregnant women suffer from the nausea and vomiting of pregnancy. In most patients this condition is not severe and disappears spontaneously. In a certain percentage, however, the condition is severe and rather persistent; so that it may then be classified as pernicious. In this group the mortality is sufficiently high to justify strenuous measures in prevention and treatment. The margin of safety is, in some instances, so small that it is difficult to differentiate early between the extremely and the less serious cases. The symptoms in the two groups are the same except for degree of severity.

Etiology is entirely uncertain, but the possibilities will be enumerated:

1. Reflex disturbances from other parts of the body: Those to which significance has been attached have been usually malpositions of the uterus or disease of the adnexa. Occasionally correction of such findings results in marked improvement. Many obstetricians believe that such improvement is the result of suggestion rather than the changing of the original finding. Certainly suggestion plays an important rôle in the treatment of hyperemesis.

2. Neurosis or psychoneurosis also plays a part: In many patients there is an underlying nervous instability. The emotional upsets that occasionally accompany a pregnancy may be the exciting factor in the manifestation of such a neurosis.

3. True gastric disease: In a very few instances local gastro-intestinal disease may be found. The number of such patients is very inconsiderable, and a careful history and examination usually suffice for a correct diagnosis.

4. Focal infections: Certainly in any case one should not overlook the influences which might result from focal infections regardless of their location. These may manifest themselves in the teeth, tonsils, urinary and gastro-intestinal tract.

5. Endocrine disturbance causing changes in metabolism: There is abundant evidence to support the belief that metabolism is changed during pregnancy, and work on the various glands has determined that they show marked changes in function during pregnancy. Our knowledge, however, does not lead to the conclusion that any endocrine change is so constant that it accounts for the hyperemesis. Treatment of the condition by the use of glandular extracts may again be explained by the suggestion associated with their administration.

6. A true toxemia resulting from the introduction into the maternal system of fetal products:

Abundant evidence is at hand to show that fetal products are constantly introduced into the maternal circulation and are carried to various parts of the body. This may result in a toxemia or poisoning in certain patients with a high degree of susceptibility to such products and may cause certain pathology of important organs. Carried to a higher degree, the result is loss of function of these organs and changes in the entire organism which may lead to death. Certainly this theory must be taken rather seriously in the light of our present knowledge.

Regarding pathology, one finds at autopsy the greatest change in the liver. There is usually considerable degeneration and necrosis, particularly around the hepatic vein. The kidneys usually show secondary changes, giving a picture similar to that found in the so-called cloudy swelling of the kidney. These findings, however, are by no means constant. During the course of the illness one has very little pathology which is demonstrable. Blood chemistry has been found to be of no importance. The appearance of urobilin and urobilinogen in the urine may not necessarily mean a severe form of the disease; but when they persist in spite of treatment, it usually means a rather diminished ability of the liver to regenerate itself. There are also the changes resulting from starvation and dehydration.

In summary, we may say that the pathology is fairly well known, but the etiology remains only conjecture, with the weight of present knowledge favoring a toxemia, most probably of fetal origin.

* * *

FLOYD JAMES LEE, M. D. (710 Wilshire Boulevard, Santa Monica).—*Symptoms and Diagnosis.* The gestational alterations of those organs which govern metabolic process, with the resultant adjustments of the entire maternal organism, result in either a normal metabolic balance or a disturbed one. Nausea of pregnancy is a symptom due to altered organic function.

So common a finding is this symptom that we almost accept it as a part of the pregnancy, until the nausea and vomiting arrive at the stage of toxic vomiting of pregnancy. This stage is characterized by uncontrollable vomiting, rapid emaciation, and the terminal stages of delirium and coma.

Nausea of pregnancy is defined as one of the manifestations of the toxemia of pregnancy occurring during the early months of pregnancy. The essential cause is as yet unknown. All cases of nausea of pregnancy have a common underlying cause which may show itself in various phases.

The most satisfactory theory, at least from the standpoint of treatment, has been the disturbance of the carbohydrate metabolism, first stated by

Duncan and Harding in 1918. A disturbance of the carbohydrate metabolism is a common feature, and the condition of the glycogen-depleted liver, the occurrence of ketosis, the periodicity of the symptoms with the time in pregnancy when there is a negative nitrogen balance and when the carbohydrate storehouse, the placenta, is as yet not formed.

One other theory—that of E. Aburels, announced in 1931—given a nervous spasmophilic and have a susceptible individual, the irritation of the uterus during pregnancy produces a uterogastric reflex, causing a spasm of the pyloric reflex of the stomach, and vomiting results.

Clinically, no satisfactory distinction can be made between toxic and neurotic vomiting.

Course and Symptomatology.—Usually the physician's attention is directed to a case of aggravated "morning sickness." The severe symptoms usually appear in the third month at about the time the patient should be over her nausea of pregnancy. The nausea and vomiting increase in severity, the frequency varying from emesis several times a day to immediate rejection of any food or liquids taken. The partial or complete abstention of food, coupled with the loss of fluids by vomiting, cause an acute anhydremia. This creates a concentration of the serum proteins, which soon leads to liver degeneration. Liver degeneration is caused by anhydremia, and concentration of serum proteins rises.

Morning Sickness.

"Morning sickness" occurs in early weeks of pregnancy, and is characterized by:

1. Nausea.
2. Vomiting worse at some period of the day. Able to retain food and water at times.
3. Tends to spontaneous adjustment at about the fourth month.

Toxic Vomiting.

1. Usually in the third or fifth month.
2. Vomiting continuous upon ingestion of food or water.
3. Rapid loss of weight and strength.
4. Pulse rapid.
5. Urinary changes present (acetone and diacetic).
6. Not maintaining a normal water balance, as shown by low daily output of urine with high specific gravity.
7. Delirium and coma.

Urinalysis.

- Specific gravity greater than 1010.
- Low output for patient.
- Acetone and diacetic.
- Urobilinuria, severe type, with liver damage; prognosis poor.

Pulse.

Pulse if increasing and above 100; prognosis grave.

Our diagnosis rests, then, on a gestational history with physical examination and the symptoms due to: starvation, dehydration, hepatic derangement, and neurosis.

Stated again, we must consider: an accurate and positive diagnosis of pregnancy; the signs and symptoms of nausea of pregnancy; and the urinary findings.

A careful and complete physical examination will distinguish between emesis due to pregnancy

and emesis during pregnancy. Emesis during pregnancy may be due to causes having no relation to the pregnancy, such as: reflex vomiting due to displacement of uterus, tumors, diseases of adnexa; gastric ulcer, gall-bladder disease; bowel obstruction; and neurotic vomiting.

* * *

JOHN W. SHERRICK, M. D. (350 Twenty-ninth Street, Oakland.—*Treatment and Prognosis.* In attempting to outline a rational treatment of the nausea of pregnancy, one is faced with two difficulties: first, the widely divergent and often bizarre and wholly inadequate views advanced in an attempt to explain its causal factors; second, the confusion that exists as to the proper procedure to follow. There is no recommended routine method applicable to any or all classes of cases, but in each instance one must consider the individual. While certain general routine principles have been established, these must be changed as circumstances demand, and in every case all causal and related factors must be evaluated because of their bearing upon the details of therapy.

Fundamentally, the nausea of pregnancy, whether classed as neurotic, reflex, toxic, mild, moderate, severe, physiologic, etc., is the same in all except for degree, some factors being more prominent in one than in another. No matter how mild the condition, we prefer to consider all cases as presenting, sooner or later, some toxic element arising from the products of gestation with resultant metabolic disorder. While the majority of cases are of minor degree and are strictly self-limited, all are potentially capable of progressing to a much more serious state, and it is this type we are most concerned with in this discussion, and which presents the following characteristics forming the keynote upon which treatment is based. First, liver dysfunction with hypoglycemia, inability to store up glycogen, acidosis, disability to detoxify substances from the intestinal tract; second, low sodium chlorid, with a condition somewhat analogous to intestinal obstruction; third, dehydration which may be considered the key to the condition; fourth, loss and lowering of free hydrochloric acid and of total acid in the stomach from vomiting or from regurgitation of alkaline intestinal contents with neutralization of acid, when alkalosis may result.

The individual who is essentially unstable, or nervously or physically inadequate, is the one who is the most likely to react excessively to the stress of pregnancy. For this reason the ideal situation in the treatment of vomiting of pregnancy would be a thorough study of the patient's physical stability or inadequacy, and an analysis of her nervous and mental state before her pregnancy, with eradication of any possible factors that may directly or indirectly add to its stress and strain.

Treatment is based on the assumption that vomiting of pregnancy is a condition of potentially progressive seriousness. Of prime importance is: first, early recognition of the condition and institution of a definite regimen characterized by reassurance and an air of confidence and under-

standing. Prolonged and frequent periods of rest and relaxation, preferably in the fresh air, are essential, and the patient should avoid undue physical fatigue and the nervous tension and strain of social engagements. Many cases are mild and will not require more than intelligent prenatal supervision with a more or less uniform regimen. Most patients will get well regardless of the type of treatment. Second, the evaluation and elimination of such existing pathologic conditions as anemia, foci of infection, abdominal pathology, pelvic irritation, and nervous influences. Third, diet control characterized by frequent small feedings of high caloric value including dry, salty foods (pretzels, saltine wafers, potato chips, dried beef, crisp bacon, etc.), carbohydrates (desserts, cakes, candies, fruits). The patient should avoid the odors of cooking and the messiness of kitchen work. Dilute hydrochloric acid may sometimes be used to advantage to maintain the chlorid balance. An occasional gastric lavage with soda bicarbonate solution, or a dilute hydrochloric acid solution, is essential in the presence of reversed peristalsis with bile in the stomach. Fluids should be ingested between feedings in amounts sufficient to maintain normal metabolism requirements and kidney output—fruit juices, tea, coffee, milk, and charged waters. Daily bowel movements are secured by diet control, vitamin B, suppositories, soda enemas, mild cathartics. We advise against the use of most cathartic aids taken by mouth, as they may add to the nausea. Fourth, mild sedatives of a character and amount to control any nervous tension and gastric irritability—sodium bromid, phenobarbital and phenobarbital sodium by mouth or rectum, or luminal sodium hypodermically. Some give as an aid to the latter whole ovary or corpus luteum extract alone or combined with placental extract (we are at a loss to evaluate their real usefulness, but feel that they have often proved useful). Hypodermic medication may be given to advantage at the patient's home by some member of her household.

The above suggestions altered to meet the individual case serve usually to control the mild and moderately severe types of nausea of pregnancy. But some individuals do not respond to these measures, and the condition takes on a steadily progressive and more severe reaction with marked dehydration, starvation and other evidences of severe toxemia, and demands additional and more heroic treatment. This implies complete bed rest, preferably in a hospital, under the care of a nurse experienced in this particular problem; one who combines sympathy, understanding, firmness, insight and tact.

All food, medication and fluid by mouth are withheld except to permit of gastric lavage with soda bicarbonate solution and cleansing of the mouth with an alkaline wash. The bowel is thoroughly emptied by means of a soda or saline enema, or high colonic irrigation. After permitting the bowel to rest for an hour saline or five per cent glucose and two per cent soda bicarbonate in saline is administered by proctoclysis in amounts of ten to twelve ounces and repeated four hourly. To the first amount is added sodium

or triple bromid grains thirty to forty; to the second two drams of compound tincture of opium, etc. We prefer the small and oft-repeated retention enema to the continuous drop method, although the reservoir permits of expulsion of the gas and maintains a constant amount of fluid in the colon. Care must be taken to avoid irritation of the bowel to the point of intolerance.

One thousand cubic centimeters of 10 per cent glucose solution are given intravenously and repeated in twelve hours as necessary to maintain fluid requirements and to offset the hypoglycemia and the starvation acidosis. This should be given very slowly to avoid any reaction. Some advocate insulin in divided doses, thirty units in all, to aid in the utilization of the carbohydrate. May we suggest, however, that insulin often carries very definite risks and should be used with great caution! Adrenalin should be available for emergency. Normal saline or Fischer's solution is given by hypodermoclysis as demanded by the dehydration and the chlorid need. At least three thousand cubic centimeters of fluid are needed daily. Alkali medication, in the form of soda bicarbonate or potassium citrate, is utilized as necessary to aid in overcoming acidosis. Dilute hydrochloric acid is used for an alkalosis. One may make use of repeated gastric lavage with an alkaline solution, or with a dilute hydrochloric acid, utilizing the duodenal tube. This may be introduced into the duodenum and left in place to permit of installation of fluid, food, sedative, thus supplementing or replacing intravenous therapy.

With the dehydration and acidosis overcome, and gastric and nervous stability and liver function restored, food and fluid intake may be resumed. The patient is first given water in small amounts at frequent intervals and this is soon followed by food. A carefully selected diet is chosen by the nurse or dietitian and is attractively served in small amounts, the patient being instructed that she must eat all that is placed before her. Luminal sodium is given, hypodermically, twenty minutes before eating, the dose being gradually cut down. The patient is assured that she cannot vomit after taking this medicine. Food and fluid intake are increased as the patient can tolerate them until a full diet is resumed. One should never lose sight of the individual nature of each case, and of the importance of suggestion, reassurance, confidence, understanding and tact in dealing with this problem. Early treatment will usually prevent the development of the more pernicious form of the condition.

As regards prognosis, one may state with certainty that nausea of pregnancy is curable in by far the majority of cases. At least 50 per cent of all cases are controlled by intelligent prenatal care, proper regulation of diet and hygiene, mental suggestion, etc. The severe form should respond to intensive treatment as outlined. Rarely termination of the pregnancy by abortion may be necessary, in spite of adequate treatment in the presence of persistent vomiting, dehydration, fever, high pulse, jaundice. A good index as to progress in the wrong direction is a rise in pulse and a fall in blood pressure.

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Leaflet Regarding Rules of Publication.—California and Western Medicine has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this journal write to its office requesting a copy of this leaflet.

EDITORIALS*

NEWLY-ELECTED OFFICERS OF THE C. M. A.

The April issue of CALIFORNIA AND WESTERN MEDICINE printed the complete program of the sixty-third annual session of the California Medical Association at Riverside from April 30 to May 3, with the Mission Inn as the Association's headquarters. But because all copy for each issue of the official journal is sent to the printer on or before the twentieth of the preceding month, it is not possible to give in this number any detailed information concerning this year's convention. Such a report and comment must be reserved for publication in June.

The forms have been held open, however, to permit the insertion here of the names of the new officers just elected. These are as follows:

(a) President-Elect: Robert A. Peers, Colfax.

(b) Speaker of the House of Delegates: Edward M. Palette, Los Angeles.

(c) Vice-Speaker of the House of Delegates: John H. Graves, San Francisco.

* Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comments column, which follows.

(d) Councilors:

Third District: Henry J. Ullmann, Santa Barbara; Sixth District: Karl L. Schaupp, San Francisco; Ninth District: Henry S. Rogers, Petaluma.

Councilors at Large: Harry H. Wilson, Los Angeles; William H. Kiger, Los Angeles; Junius B. Harris, Sacramento.

(e) Delegates to the American Medical Association for the sessions of 1935-1936: Charles A. Dukes, Oakland; Clarence G. Toland, Los Angeles; Junius B. Harris, Sacramento; William R. Moloney, Sr., Los Angeles. Alternates: Edward N. Ewer, Oakland; Edward M. Palette, Los Angeles; John Hunt Shepard, San Jose; John C. Ruddock, Los Angeles.

Next year's annual session will be held in Yosemite National Park.

In next month's issue the minutes of the House of Delegates, and also of the general and other proceedings will be printed.

BASIC SCIENCE (QUALIFYING CERTIFICATE) LAWS

The March CALIFORNIA AND WESTERN MEDICINE, page 194, and the issue for April, page 302, presented some comments on a proposed basic science (qualifying certificate) law for California, but only a brief outline of such a proposed act was indicated.

Lest the proposition be misunderstood, it should be remembered that such a law would in no manner interfere with the present or future standards of our own California Medical Practice Act, in which obtains the three years of preliminary education as attested by collegiate standards.

However, an honestly tested high school standard is a real advance on the preliminary education of one California cult which already has several thousand legally-licensed graduates. A basic science law would have gone far to prevent such a low educational standard and the ensuing embarrassing situation.

So, also, as regards the five subjects in which the examinations were to be held. If English, physiology and chemistry were made obligatory, the remaining two subjects might be selected by the candidate from anatomy, physics, botany, zoölogy, or biology. Any five of these fundamental non-medical subjects, with examinations by a high-standard board, non-partisan and of the non-healing art, would seem to fulfill one of the major purposes of a basic science, or qualifying certificate, law.

These comments are made in answer to several letters from members of the California Medical Association who were kind enough to send in their own viewpoints. It is hoped, therefore, that other members will feel free to offer their suggestions to the Special Committee on Basic Science Act.

"PUBLIC HEALTH AND PRIVATE DOCTORS"

Under the above caption, the April *Survey-Graphic* of New York prints a series of articles on public health, the first or leading article of the issue having the above title and presenting some

seven pages of discussion of the "Health Centers of Los Angeles County." The article is replete with commendation of County Health Officer J. L. Pomeroy, and equally generous in its criticism of Dr. Harry H. Wilson, secretary of the Los Angeles County Medical Association, and Dr. Phoebe Berman, medical director of the Los Angeles County Hospital.

To many members of the medical profession in Los Angeles, however, who have watched the development of the health center program in that county, some of the statements referred to must seem more than passing strange. The writer of the leading article, for example, did not limit her criticism to Doctors Wilson and Berman, for she was little less caustic in her statements concerning "hungry men in Los Angeles County" generally, (meaning by that, doctors of medicine, and more particularly, members of the Los Angeles County Medical Association).

The following paragraph should be of interest:

"This organization [the development of the Los Angeles County health centers] was the more remarkable in that it was carried out in the face of great opposition to accepted medical science. A recent survey showed that 50 per cent of the county's population rely upon types of service other than that of regular medical men: upon osteopaths and chiropractors, upon Christian Science practitioners, New Thoughtists, drugless healers, and no end of cults. Physicians constitute only 50 per cent of the individuals licensed as medical practitioners in Los Angeles County. With half of the public and an even larger proportion of the practitioners opposed to scientific medicine, the development of a comprehensive health program has required not only endless labor and never-ceasing vigilance on the part of its director [Doctor Pomeroy], but the continued loyal support of the medical profession; and all these it had, even the last, until hard times hit the doctors."

The writer further comments on the fact that the curative clinics in the County Health Department's "health center" buildings had been placed under the jurisdiction of the out-patient department of the Los Angeles County Hospital; and that subsequent to this, all health centers other than the Alhambra Health Center had adopted the San Fernando plan, which has been commented on in these columns in a former issue.* After a glowing word tribute to the Alhambra Health Center, the critic begins a new paragraph with the statement:

"This is the kind of health service which Los Angeles County has discarded because some of her doctors were hungry. There is no doubt about the cause." . . .

Hark again to another outburst, betraying somewhat the real breadth of view of the author:

"If the Medical Association and the Public Health League have their way, the Los Angeles Health Department will soon be relegated to the position in which Doctor Pomeroy found it in 1915, when the job of the health officer was to tack a quarantine placard upon a door, and clean up nuisances. Not only Los Angeles is threatened, but every community in California. A few weeks ago word was received that Merced County was about to add a new wing to its county hospital. An emissary from the Public Health League was sent up at once. He returned to boast that he had succeeded in blocking the movement."

The seven-page "leader" of this New York publication, the *Survey-Graphic*, concludes with the following:

"The state of mind that lies behind the doctors' strike in Los Angeles County has not, unfortunately, been absent from other parts of the country. But as the development of public-health organization has been more complete and effective in Los Angeles than in any other large unit, so is the breakdown the more serious and significant. There is an ironic twist in the fact that the doctors, striking with one hand at what they call *state medicine*, should eagerly reach with the other for public money. The person who seems to have gone without voice in the controversy, and almost wholly without knowledge of its reach and implications, is the very taxpayer whose money is being transferred from public service to private pockets.

"No one doubts that the doctors, along with other professional groups, have been hard-pressed by these last years, nor that we need now, more than ever, a social realignment of medical service that will give doctors greater security of income, and patients greater assurance of adequate care in time of need. What has happened, and is happening in Los Angeles County, however, is a mockery to the constructive American spirit which is struggling to push our country through and out of hard times. The advantage of the few has been made paramount to the service and need of the many."

1 1 1

Comment.—Under its editorial masthead, the editor of the *Survey-Graphic* also writes:

"The group of articles which head this issue bear on what will be a major editorial aim in 1934: exploration of possibilities, pitfalls, and concrete proposals leading toward a national plan for health."

It will be interesting to note what the coming months will produce in the development of such an editorial policy.

As for the dissertation on "Health and Private Doctors," as expounded in its April issue, while it may make a good "feature article" for a lay publication, we believe it to be so warped, and so far from the real facts, as regards the rôle which scientific and organized medicine have had in the recognition and solution of public health problems in Los Angeles County, that it will have little influence in changing the present set-up in the county; although it is quite possible that it may be frequently quoted by misinformed persons, and by special interests having good reason to be opposed to scientific medicine. It is unfortunate, indeed, that it should have been presented with any such special display. Nevertheless, the perusal of the article may be worth the time, because it reveals how a certain kind of supposedly altruistic enthusiasm can lead a probably well-meaning person into giving a mass of biased or part facts and then drawing therefrom the most erroneous conclusions.

To read more refreshing, saner and reliable facts having relation to systems of so-called state medicine, the readers of *CALIFORNIA AND WESTERN MEDICINE* are referred to the excellent series of articles by the nationally known consulting statistician, Frederick L. Hoffman, LL. D., whose Paper I appeared in the April issue of *CALIFORNIA AND WESTERN MEDICINE*, on page 245; Paper II being printed in this issue, on page 361. Members of the California Medical Association are urged to read Doctor Hoffman's articles.

* *CALIFORNIA AND WESTERN MEDICINE*, Vol. XXXIX, No. 6, December, 1933, page 417.

PSITTACOSIS*

Psittacosis (parrot fever) is one of the diseases which, up to some three years ago, American physicians in their daily practice were not compelled to take into consideration. Now, however, it is of especial interest to Californians because many parrot birds are imported into the State, and because, in Southern California, the breeding of parakeets (love birds) and other types of the parrot or psittacine family has become a well-established industry; and because of these changed conditions it has proved necessary, in the last three years, for the California State Board of Health to give much attention to the subject.

To lay down rules for the prevention of psittacosis, particularly in relation to aviaries and pet shops where these birds are bred and sold, and not to work hardships upon the owners of such establishments, has been no easy task. The Hooper Foundation of the University of California, through its director, Dr. Karl Meyer (who is a consulting pathologist of the State Health Board) has rendered yeoman service in carrying on scientific studies of the disease, both as to the investigation of fatal and non-fatal cases in human beings, and as regards post-mortem, inoculation, and other work having to do with birds from aviaries, infected or suspected of being infected.

* * *

A Recent State Health Board Regulation.—On April 2 last, the California State Board of Health, through its director, Dr. J. D. Dunshee, issued the following order, which indicates the seriousness of the situation.

"The California State Department of Public Health has temporarily discontinued certification for shipment on all psittacine birds, pending further investigation of reported cases of psittacosis (parrot fever). This affects movement of these birds both within the state and to points outside. . . .

"Since December 1, 1931, in California there have been sixty-seven proved cases of psittacosis, with fourteen deaths. There have been 106 cases reported in other states, with twenty-two deaths. The investigation on some of these outside the state has not been completed, and the truth of all reports will be confirmed or disproved before final action.

"The United States Public Health Service is investigating all cases outside of California, and the course taken by the State Department of Public Health is necessary at this time to protect both public health and the bird industry of California. We are, naturally, doing everything possible toward both these ends."

* * *

An Outbreak of Psittacosis in Pittsburgh.—The most recent outbreak of psittacosis was in Pittsburgh where, in March, a total of some ten deaths,

and some forty cases of the disease were reported. An editorial in the *Pittsburgh Press* for March 22 ran in part as follows:

"Speaking before the Allegheny County Medical Society Monday night, Dr. W. W. G. MacLachlan declared:

"If the figures are true—about twelve dead and forty or fifty cases—we probably have the greatest (parrot fever) epidemic of its kind medical history affords."

"The society called upon the health department for all available information regarding the epidemic, and members joined in a demand for the destruction of birds of the parrot family and isolation of patients as a precaution against spread of the disease. . . . The first shipment of sick birds, apparently, arrived in Pittsburgh on January 18. Other shipments containing sick and dead birds arrived during January—at least one of which was subsequently released for sale after only ten days of isolation.

"Deaths seemingly connected with the epidemic occurred during February. . . .

"On March 12 the department asked dealers voluntarily to quarantine their birds. On March 15 the first official report of a death caused by psittacosis was filed, and on that same day the quarantine was made mandatory, and Doctor Mayer telephoned the United States Surgeon-General for assistance.

"Yesterday, March 21, Coroner McGregor appealed to the City Council for a bill to prohibit importation of birds of the psittacine family and to force destruction of such birds within the city. And the medical society appealed for isolation of patients."

From another article, entitled "City Ignores Protests and Kills Parrots" (it must be remembered that the Pittsburgh papers for days gave much space to the outbreak), the following is quoted:

"In Washington, Dr. L. R. Thompson, assistant surgeon-general of the United States Public Health Service, announced that destruction and prohibition of parrots and related birds, as ordered here, is a 'proper and necessary step' in controlling psittacosis.

"He commended, also, isolation of all patients as recommended by the medical society, and pointed out that five states have passed laws prohibiting the interstate transportation of psittacine birds.

"Doctor Mayer [of Pittsburgh], himself, expects to go to Washington tomorrow in connection with a proposed local housing project, and while there will confer with Surgeon-General Hugh S. Cumming on the situation here to ascertain if there are further steps which can be taken to curb the disease.

"In an indirect way, the state of California, where the sick birds which started the epidemic apparently came from, was also in the battle against it.

"Dr. Karl F. Meyer of the Hooper Foundation for Medical Research, of the University of California, is examining sputum from six birds sent to him by Doctor Mayer on March 12.

"In its preliminary draft, the ordinance which the Council will act on, as drafted by Thomas F. Benner, assistant city solicitor, follows:

"An ordinance prohibiting the bringing into and maintaining of parrots in the city of Pittsburgh, providing for the destruction of all parrots therein, conferring certain powers upon the Department of Public Health, and providing penalties for violation thereof. . . ."

* * *

Report on Recent California Cases.—The above facts are submitted at this time to indicate the seriousness of this almost unknown disease; and from the report to the members of the California State Board of Health by H. L. Wynns, M. D., chief of the Bureau of Epidemiology, for the

* Articles and items on psittacosis, printed in former issues of CALIFORNIA AND WESTERN MEDICINE, are as follows:

Volume XXXVIII, No. 6, June, 1933, page 445.

Volume XXXIX, No. 6, December, 1933, advertising page 25.

Volume XXXIX, No. 6, December, 1933, advertising page 26.

Volume XXXIX, No. 6, December, 1933, advertising page 34.

Volume XL, No. 3, March, 1934, page 212.

Volume XL, No. 4, April, 1934, page 313.

Volume XL, No. 4, April, 1934, advertising page 29.

month of March, the following paragraphs are selected:

“Suspected Psittacosis.—An investigation was made of the death of one man, and the reported illness of another connected with a large aviary. The brother-in-law (age 66) of a Los Angeles County bird dealer came to California in January and started working, cleaning and constructing bird pens. In March he developed symptoms of ‘flu’ and on about the third day developed bronchopneumonia with cough, and later considerable ‘prune juice’ sputum. He expired March 8. The dealer himself was too ill with a ‘cold’ to attend the funeral, but did not have a physician. The rumor that others in the bird store were also ill with ‘flu’ is now being investigated. No sputum or other laboratory specimens were available on these other cases, as all had recovered.

“Psittacosis.—At the request of the health officer, a suspected case in Venice was investigated. The patient, a housewife, age 70, received a pair of parakeets as a gift in December, 1933. In February, one took sick and after about ten days died. Another bird was obtained to mate the surviving one, which had not been sick. The patient became ill on February 21 with severe headache, vomiting and prostration. She continued to run a very stormy course. The x-ray showed a fairly heavy confluent pneumonic process involving most of the left lung. The white blood count was 12,000 and gradually dropped lower. The findings and clinical course were that of a typical psittacosis case. Sputum and the two parakeets are being tested in the laboratory. The aviary from which the parakeets originated is now in quarantine.”

In future issues, this subject will again be considered.

BUBONIC PLAGUE

In the “Lure of Medical History” department (see page 363) is printed an article on the bubonic plague by former Surgeon-General Rupert Blue, who in the year 1907, early in his career in the United States Public Health Service, had much to do with getting control of the then bubonic plague outbreak in California. In more recent years, he was detailed to aid in securing the passage of rat-proofing building ordinances in Southern California. Such an ordinance was enacted by the supervisors of Los Angeles County a year or so ago; but the city of Los Angeles, although it went through the outbreak of the plague so recently as 1924 (so serious that, had it not been discovered early, it would have worked havoc with that metropolitan center), has been not only apathetic but rather resistant to the adoption of such a much-needed ordinance.

In the California Medical Association official publication of just twenty-five years ago (May issue of the *Journal of the Medical Society of the State of California*) was printed an editorial commenting upon a dinner tendered to Dr. Rupert Blue, as an expression of appreciation of the service he had rendered in leading a successful battle against the plague outbreak in San Francisco and adjacent counties. From this we quote, because it is well to remember (skeptics to the contrary, notwithstanding), that all scientific evidence shows that the *Bacillus pestis* has a wide distribution in the rodent population of California, and that, given suitable conditions—as happened in the Mexican district of Los Angeles several years

ago—an outbreak of bubonic plague among human beings could easily take place.

Because California owes a good deal to Doctor Blue, who now resides in Washington, D. C., the following is cited from CALIFORNIA AND WESTERN MEDICINE’s files of twenty-five years ago:

“Notable Banquet.—On March 31, a most remarkable thing occurred: the citizens of San Francisco tendered a banquet to a physician and presented him with a magnificent watch. A year and a half ago the same citizens were ready to mob anyone who suggested that there was any necessity for calling upon Doctor Blue or anyone else to fight plague; for the reason that, in their almighty opinion, no plague existed in San Francisco. But all things change; and so did the opinion of these distinguished citizens—including the mayor. The Council of the State Society called a public meeting and through some happy accident, two members of the Merchants’ Exchange, out of some eight hundred members of the commercial bodies that had been invited, attended the meeting. These two listened to the remarks made by the physicians present, and came to the conclusion that they had better wake up before the city was quarantined. The rest is history. The fight was a hard one for Dr. Rupert Blue, because he had to fight not only the plague, but an ignorant and an antagonistic people; but he won. His tact, his courtesy and his efficiency are known to all who have come in contact with him, and the prominent citizens of San Francisco certainly did themselves great honor when they so publicly admitted their previous stubbornness, and their very present gratitude and apology.”

EDITORIAL COMMENT*

SICKNESS AND THE ECONOMIC DEPRESSION

Despite the economic depression the gross death rate in the United States has reached a record low. Obviously, this should be cause for gratification, but scarcely cause for uncritical exploitation in insurance advertising as has already occurred. We cannot remain blind to the fact that the repercussions of the economic depression, as far as mortality rate is concerned, may not be heard until later; meanwhile, we are well aware of the fact that at least among certain classes and localities illness and malnutrition rates are much higher than normal. It is difficult to imagine that such increases will not in time be reflected in the mortality rate.

In the meantime, the United States Public Health Service, in an effort to keep its finger on the pulse of the public welfare, has made a survey of the prevalence of sickness and malnutrition as related to economic changes. In this survey “records of illness for a three months’ period in 1933 and an income and employment record for four years for some 12,000 families in ten cities by house-to-house canvass” was made. The report¹

* This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

¹ Sickness and the Economic Depression. Preliminary Report on Illness in Families of Wage Earners in Birmingham, Detroit, and Pittsburgh: Perrott, G. St. J.; Collins, S. D., and Sydenstricker, E. Public Health Reports, 4:1251 (Oct. 13), 1933.

of this investigation includes data from three cities, Birmingham, Detroit and Pittsburgh—cities in which the unemployment rate was high and the population examined mainly one whose standards of living had been definitely lowered by the economic depression.

Control groups consisted of intermingled families still obtaining adequate food, clothing and shelter, and of families which even prior to the economic depression might be considered as having lived below the comfortable economic standard. These two groups may be considered as having experienced no economic changes despite the depression. The significance of this is brought out in the conclusions reached by the investigators, viz., that "The highest illness rate is reported by a group which was in reasonably comfortable circumstances in 1929 but which had dropped to comparative poverty by 1932; their rate is 60 per cent higher than that of their more fortunate neighbors who were equal in economic status in 1929 but suffered no drop in income by 1932."

From these findings we may presume that whatever influence the economic depression will have on the gross mortality rate will be dependent on the size of the group which has experienced the greatest drop in the standard of living. Perhaps our present low mortality rate is the result of a successful effort on the part of our social relief agencies in keeping this group comparatively small during the period of economic readjustment. It remains for the future to determine whether such an optimistic conclusion is justified.

1136 West Sixth Street.

HYMAN MILLER,
Los Angeles.

ON ENZYME FORMATION

The recent work of Stephenson and Strickland^{1,2} affords a nice example of what Sir F. G. Hopkins has called the "birth of an enzyme." When *B. coli* is grown in the presence of formate, an enzyme is produced which will accelerate the decomposition of this molecule. When these organisms are transferred to an N-free medium, preventing growth, the formate-oxidizing property is retained. However, if the enzymes are grown in the absence of formate, and then transferred to an N-free medium which contains formate, there is no such reaction. The organism must be in contact with formate *during growth*. These experiments exclude the possibility of selective survival, sometimes invoked to explain adjustment of culture to new types of media.

The phenomenon is not new. Dienert³ showed in 1900 that if yeast, which does not ferment galactose, is inoculated into a glucose-galactose medium, it develops the capacity to ferment the latter in about twenty-four hours. Von Euler and

Jansson⁴ found that in this case, too, presence of galactose during the growth phase is essential.

H. Fink has studied an interesting case in point.⁵ Top yeast is characterized by a four-band cytochrome spectrum, bottom yeast by a two-band. One variety can be transformed into the other by using a very small inoculum, and maintaining, under aerobic conditions, to get top yeast, or anaerobic conditions for a yield of bottom yeast.

In these instances the chemical character of the cell has been altered by the chemical environment, and new enzymes have been produced by the "stimulus" of new types of food molecules.

Department of Physiology,
Stanford University.

J. FIELD,
Palo Alto.

CONE-NOSE BITES—THEIR EFFECTS

The bite of the western blood-sucking cone-nose *Triatoma protracta* (Uhler) has been reported by physicians, health officers, and others as causing serious systemic disturbances, as well as swellings, welts, red blotches, and eruptions on the bodies of persons bitten. The writer, working under the direction of Professor W. B. Herms, of the Division of Entomology and Parasitology of the University of California, has for some time been engaged in studies of the anatomical aspects of this insect. During the investigation certain observations have been made which are thought to be of special interest and importance to practicing physicians and those concerned with public health problems.

In the laboratory the insects were kept alive and reared through their nymphal stages to the adult by feeding them on mammalian blood obtained from experimental animals, such as rats, mice, and rabbits. The bugs sucked blood readily from these animals, apparently without causing them any pain or harm. No fatalities ever occurred and no spots, marks or blotches were noted at or around the point of entry of the mouthparts or setae. This observation led the writer to suspect that the effects of the bites are far less serious than generally believed. In order to obtain firsthand information on this point, he allowed himself to be bitten several times.

A bug was placed on the back of the hand and immediately it attacked the skin and began to suck blood. The pain accompanying the penetration of the skin was less than that caused by the prick of a fine needle and was hardly perceptible. Two hours later another bug of the same species was allowed to bite, this time on the palm of the hand. The bug experienced no difficulty in driving its stylets through the thick skin and it sucked blood until its body became bloated and pear-shaped, but no pain was felt. At intervals of thirty minutes three more bugs were allowed to feed successively on the same hand; each time with the same results.

After a period of two weeks the experiment was repeated: this time with a bug which had been

¹ Stephenson, M., and Strickland, L. H.: *Biochem. J.*, 25:205, 1931.

² Stephenson, M., and Strickland, L. H.: *Biochem. J.*, 26:712, 1932.

³ Dienert, F.: *Ann. Inst. Pasteur*, 14:137, 1900.

⁴ Von Euler, H., and Jansson, B.: *Ztschr. f. Physiol. Chem.*, 226:169, 1927.

⁵ Fink, H.: *Ztschr. f. Physiol. Chem.*, 210:197, 1932.

sent in to the department from a town where the infestation of cone-noses in a certain house was said to be particularly severe. The inhabitants had been bitten on several occasions, and reported itchings, swellings, and general nervous disturbances as results of the bites. The writer in this instance also felt no ill effects.

The validity of some of the reports concerning the serious effects of cone-nose bites can hardly be questioned, but they are probably frequently exaggerated. The finding of a big black bug over half an inch long in the house or in one's bed is likely to cause an "itchy" feeling, or to have a "paralyzing" effect on the finder, even without his having been bitten. It is also a well-known fact that some individuals are more sensitive than others to insect bites, poison oak and other irritants. A sensitive individual bitten by a cone-nose will probably show many, or perhaps all, of the symptoms reported, while a less sensitive person would not react at all.

The danger of cone-noses, however, should not be underestimated, as trypanosomiasis, various other diseases and secondary infections may be caused either by contamination or bites of these insects.

521 Cedar Street,
St. Peter, Minnesota.

J. A. ELSON,
St. Peter.

THE RÔLE OF GLYCIN IN MUSCLE METABOLISM

The large group of myopathies, of which progressive muscular dystrophy is an outstanding example, has been looked upon for some little time as essentially a disturbance in muscle metabolism.

As early as 1870¹ it was known that certain myopathies were associated with a severe disturbance in creatinin excretion, as indicated by a diminished daily output.

In 1909, Levene and Kristeller² found in cases of progressive muscular dystrophy that there was not only a low creatinin, but a high creatin output, which was increased by a larger intake of protein in the diet. In other words, these patients had a lowered or diminished tolerance to creatin.

Recently a number of investigators have reported metabolic studies in this field with special reference to glycin administration. Kostakow and Slauck³ have reached the conclusion that glycin, the simplest alpha amino-acid, plays a very important rôle in muscle physiology. Their studies have convinced these authors that in progressive muscular dystrophy the body has lost the ability to utilize creatin, regaining this capacity under the influence of glycin. Therefore, glycin is of benefit in muscular dystrophy and the authors think that the glycin treatment has far-reaching possibilities.

¹ Rosenthal, M.: Handbuch der Diagnostik und Therapie der Nerven-Krankheiten, Erlangen, 1870.
² Levene, P. A., and Kristeller, L.: Am. J. Physiol., 24:45, 1909.
³ Kostakow, S., and Slauck, A.: Glycine Treatment of Progressive Muscular Dystrophy. Deutsche Med. Wchnschr., 59:169 (Feb. 3), 1933.

This work had been greatly stimulated by the efforts of Brand, Harris, Sandberg, and Ringer,⁴ who reported in 1929 that when glycin is fed to patients with progressive muscular dystrophy, an appreciable increase in creatin excretion takes place; indicating, in all their experiments, that there is a special and significant relationship of glycin to creatin metabolism.

Thomas, Milhorat, and Techner⁵ repeated these experiments, and fed glycin over prolonged periods of time to various patients with involvement of the muscular system; and they reported that the administration of this amino-acid had a marked therapeutic effect in some cases of progressive muscular dystrophy. In cases showing clinical improvement with treatment, there was an associated drop in creatin excretion with a rise in creatinin.

Remen,⁶ and Boothby,⁷ working with cases of myasthenia gravis, have shown encouraging results with the use of glycin, and glycin together with ephedrin.

Harris and Brand,⁸ in discussing their cases of myopathy after prolonged glycin administration, are fairly conservative in the estimation of their clinical results, but agree that this type of investigation has yielded information both interesting and extremely worth while.

The *Lancet*,⁹ in an editorial discussion on the muscular dystrophies, does not believe that this particular field of medicine is likely to be enlightened in the way of therapy from clinical studies alone, and that chemical investigation in these conditions is an uncultivated field which will repay any labor spent upon it. In agreement with Harris and Brand, "this statement is not quoted to minimize the important clinical contributions of the earlier investigators, but rather to indicate along what lines further progress probably lies."

1930 Wilshire Boulevard.

LEO J. ADELSTEIN,
Los Angeles.

⁴ Brand, E., Harris, M. M., Sandberg, M., and Ringer, A. I.: Am. J. Physiol., 90:296, 1929.
⁵ Thomas, K., Milhorat, A. T., and Techner, F.: Ztschr. f. Physiol. Chem., 205:93, 1932.
⁶ Remen, L.: Deutsche Ztschr. f. Nervenh., 128:66, 1932.
⁷ Boothby, W. M., and others: Proc. Staff Meet., Mayo Clinic, 7:557 and 737, 1932.
⁸ Harris, M. H., and Brand, E.: Metabolic and Therapeutic Studies in the Myopathies, J. A. M. A., 101:1047 (Sept. 30), 1933.
⁹ The Muscular Dystrophies: Editorial, Lancet, 2:1179, 1925.

Local Anesthetic for Nose and Throat.—From a study of the use of the hydrochlorid of piperidinopropanedial diphenylurethane (diothane) as a local anesthetic for the nose and throat, Stitt concludes that the drug, if properly used, is a satisfactory local anesthetic to replace cocain for all routine uses in the nose and throat. It may be used in considerably lower concentrations than cocain, although the onset of anesthesia is somewhat slower. The resultant anesthesia is more lasting than that produced by cocain and frequently much more striking. Its action on the ear drum allows an almost painless paracentesis. In a series of several hundred cases in which hydrochlorid of piperidinopropanedial diphenylurethane has been used, there have been no signs of toxicity and the drug has not produced the undesirable reactions sometimes found with cocain. It is safe for routine use as a spray to relieve pain after tonsillectomy and is preferred for this purpose to acetylsalicylic acid.—*Annals of Otolaryngology, Rhinology and Laryngology.*

STATE MEDICAL ASSOCIATIONS

This department contains official notices, reports of county society proceedings and other information having to do with the state associations and their component county societies. The copy for the department is edited by the state association secretaries, to whom communications for this department should be sent. Rosters of state association officers and committees and of component county societies and affiliated organizations, are printed in the directories noted under Miscellany, on the front cover index.

CALIFORNIA MEDICAL ASSOCIATION

CLARENCE G. TOLAND.....President
ROBERT A. PEERS.....President-Elect
EMMA W. POPE.....Secretary-Treasurer

COMPONENT COUNTY MEDICAL SOCIETIES

CONTRA COSTA COUNTY

The third meeting of the year was held on Tuesday, March 13, at the nurses' home of the County Hospital at Martinez, with Dr. M. L. Stauffer presiding.

Dr. B. M. Palmer of Oakland read a most up-to-the-minute paper on *Resection of the Prostate with the Electrocautery Knife*, illustrated by slides, and a very enlightening film of the technique of the operation. Through the courtesy of the General Electric Company and the Victor Company, Mr. Lipman presented one of the most instructive demonstrations we have ever had in a moving picture on *The Mechanism of the Heart-Beat, and the Electrocardiograph*. The scientific program was brought to a close by a fascinating talk by Dr. E. Huntington Benson of Berkeley on *Cardiac Disturbances*.

Doctor Stauffer announced that the next meeting will be held at Richmond on April 10, with Dr. Harry Ford, chairman.

The meeting was adjourned at 10:50 p. m., followed by the customary buffet luncheon, which was prepared by the nurses of the County Hospital.

CLARA H. SPALDING, *Secretary*.

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HUMBOLDT COUNTY

The Humboldt County Medical Society held its regular monthly meeting on April 19 at the Eureka Inn. Orris R. Myers, president, presided. There were in attendance twenty-five members and twenty-three members of the Humboldt County Nurses' Association. The society had as its guests Major Pilbury and medical staff of the C. C. C. organization.

The work the University of California Medical Department is doing toward the outside patients referred from local men was the subject of a paper by Dr. Langley Porter. Dr. S. R. Mettier spoke on *Pernicious Anemia and Treatment*, and Dr. D. S. Morton on *Uterine Carcinoma and Treatment*. Dr. C. T. Hayden accompanied the visitors.

These papers were well received and greatly increase the interest of our members in the county medical meetings.

The following committee was reported by Doctor Myers on Medical Jurisprudence: Doctors G. F. Norman, Allen Watson, and J. S. Woolford.

A discussion by Doctor Norman was held on the ownership of x-ray films.

At the next meeting, which will be held on May 17, beginning with a dinner at the Hotel Vance, Dr. Nathan G. Hale of Sacramento will present a paper on some urological topic.

LAWRENCE A. WING, *Secretary*.

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MONTEREY COUNTY

The regular meeting of the Monterey County Medical Society was held on April 6 at the Hotel Del Monte. There were twenty-one members present to enjoy the dinner at 6:30, which was served in the Gold Room of the hotel. Following this, Dr. Harry Lusignan

presented a brief summary of the essential features of the *Detroit Plan*, stressing the fact that this was not an insurance scheme, but rather a plan to get the public away from the free health clinics and back to the family doctor. The discussion which followed indicated the society's approval of the idea, and a committee was appointed, composed of Doctors Sweigert, Gray and Lusignan, to confer with the Public Health Department in developing this plan.

The speaker of the evening, Dr. R. A. Kocher of Carmel, presented a very interesting and instructive paper on the *Ketogenic Diet* in the treatment of urinary tract infections. The paper was discussed by Dr. Hugh Dormody, who was very enthusiastic over the results obtained by this type of treatment at the Monterey Hospital Clinic. The surprising fact was brought out that, while it has been known for years that epileptic patients put on the ketogenic diet are quickly free from urinary tract infections, the value of this treatment to other types of patients had not been appreciated.

The next meeting, to be held at King City on May 4, will have papers by Doctors C. B. Gorham and S. W. Hastings.

W. H. LAWLER, *Secretary*.

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ORANGE COUNTY

The regular monthly meeting of the Orange County Medical Association was held on April 3 at 8 p. m. at the Orange County Hospital.

The scientific program had for its subject, *Tuberculosis*. Dr. E. W. Hayes of Monrovia talked on the value of oxypertoneum in tuberculosis of the intestines and peritoneum. Dr. Chesley Bush of Livermore gave a series of lantern slides on *Tuberculosis in Childhood and Adolescence*. He emphasized many conceptions which have been changed in the last few years in regard to this type of pathology.

An afternoon program was held, to which all interested in tuberculosis were invited. It consisted of the following: Demonstration of pneumothorax technique; demonstration of oxypertoneum technique by members of the hospital staff; tuberculosis ward rounds, Doctors E. W. Hayes and W. S. Wehrly; demonstration of phrenico-exsaisis, in main surgery, by Dr. H. A. Johnston.

WALDO S. WEHRLY, *Secretary*.

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SACRAMENTO COUNTY

A regular meeting of the Sacramento Society for Medical Improvement was called to order at 8:30 p. m. at the Sacramento Hotel by the president, Dr. Oscar F. Johnson, on February 20. Thirty-seven members were present.

A symposium on coccidioides granuloma was presented as the program for the evening.

Dr. James T. Vance opened the discussion with a paper on the *Differential Diagnosis of Coccidioides Granuloma*. He reported nine cases during the past five years at the Sacramento Hospital. He pointed out that it was chiefly a California disease, the cause of which was discovered by Doctor Rixford. At first it was thought to be a protozoan disease later determined to be a fungus. The types (acute, subacute, and chronic) were outlined and illustrated by case histories. The differential diagnosis was discussed and reported that a few patients have been cured.

Dr. T. M. Berman gave a paper on *The Laboratory, Postmortem, and Pathologic Findings in Coccidioides Granuloma*. Portal of entry the respiratory system. The dissemination of the disease throughout the body was described.

The third paper in the symposium was read by Dr. Orrin S. Cook. He described the x-ray findings of coccidioides granuloma and compared, in lung pictures, tuberculosis and acute inflammatory processes. He also described the appearance in bone lesions.

Dr. C. E. Schoff discussed the manifestations of coccidioides. He mentioned that it stimulates any chronic granuloma. The skin manifestations are protean. The different types were discussed. The different methods of treatment were outlined—iodids, tartar emetic, dyes, etc.—but none of them were specific.

Lantern slides were used to illustrate different papers of the evening.

Those who took part in the discussion of the papers were: Doctors Scatena, Lawson, Burden, Babcock, and Harris. Doctor Berman closed the discussion and reported cases.

Dr. V. W. Pallesen's application for membership was read for the second time and voted upon. It was passed. The applications for membership of Dr. Mamie G. Pallesen and Dr. T. M. Berman were read for the first time.

The food handlers' report was read. It was moved and seconded that the food handlers' report be accepted. Passed.

Doctor Johnson appointed the following to serve on the Banquet Committee: Doctors A. M. Henderson, F. B. Reardan, and Bernard J. Rea.

FRANK WARNE LEE, *Secretary*.

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SAN BERNARDINO COUNTY

The meeting of the San Bernardino County Medical Society was held at the County Charity Hospital in San Bernardino on Tuesday, April 3. The meeting was called to order by the president at 8 p. m. There were about fifty members and guests present.

Mr. Thuresson addressed the meeting on the *Federal Relief Act*. This was followed by a discussion by Mr. Lewis and Mrs. Fleming.

The following program was given:

A paper on *Clinical Obstetrics* was presented by Dr. H. G. Hill.

Following Doctor Hill's paper, motion pictures were shown through the courtesy of Mead Johnson & Company, of the following: *Breech Extraction with Forceps*; *Breech Presentation with Manual Aid*; and *Left Mediolateral Episiotomy and Repair*. A. T. GAGE, *Secretary*.

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SAN JOAQUIN COUNTY

The regular meeting of the San Joaquin County Medical Society was held in the Medico-Dental club-rooms, Stockton, on April 5.

The application for membership in the San Joaquin County Medical Society of Dr. Verne Ross of Stockton was read and was referred for action to the Admissions Committee.

Doctor Gallegos stated that the Stockton Chamber of Commerce desired to increase its membership and urged all physicians who were not members of the Chamber of Commerce to become members at their earliest convenience. Dr. George Sanderson brought up the question of the present status of the hospital and medical insurance plans in Stockton. President Gallegos, in answer to Doctor Sanderson, stated that a recent ruling of the Attorney-General necessitated the posting of a \$25,000 bond with the Insurance Commissioner before such an insurance program could be instituted, and until there were some changes made in the law or the interpretation of the law, that the local plans could not be made active.

The scientific program was the presentation of a paper by Dr. Albert H. Rowe of Oakland. The title of this paper was *Allergy in Relation to the General Practitioner*. Doctor Rowe illustrated his talk with numerous lantern slides and stated that the field of allergy is increasing. He stated that too much reliance should not be placed on the skin tests, but the history of the condition, coupled with an elimination diet, should be taken to verify the skin reactions. The paper was discussed by Doctors Diffenbacher, Doughty, D. Powell, Bolinger, and Rohrbacher.

There being no further business the meeting was adjourned and refreshments were served.

G. H. ROHRBACHER, *Secretary*.

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SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held on Monday, April 9, at the Bissell Auditorium of the Cottage Hospital, with President Markthaler presiding.

Doctor Lamb introduced the speaker of the evening, Dr. J. R. Shuman of Los Angeles, who gave an extremely interesting paper on *Pneumonias in Children*. This was discussed by Doctors Lamb, Howard Eder, Richter, and Cresson.

Doctor Brown read a very instructive paper on *Collectivism in Medicine*, which was a résumé of his opinions formulated during his thirty years of practice.

Mr. Martinsen gave a brief talk on the *Santa Barbara Associates*, explaining their aims and objects. It was moved, seconded and unanimously carried, that the society endorse the movement of this organization, and the Public Relations Committee was instructed to act as a coordinating committee between the society and the organization.

Dr. George H. Harris of Santa Maria was unanimously elected into membership of the society.

Owing to the brief amount of time, and the importance of the reports of the Dispensary Committee and the Medical Economics Committee, it was moved and seconded that the society hold a special meeting Monday evening, April 16, for submission of these reports and for their discussion.

WILLIAM H. EATON, *Secretary*.

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SOLANO COUNTY

The regular monthly meeting of the Solano County Medical Society was held at the Hotel Casa de Vallejo on Tuesday evening, April 10, at eight o'clock, with Dr. John W. Green presiding.

Supervisors Danielson, Sheveland, and Birchmore were special guests of the evening.

An illustrated talk on the Alameda County Health Insurance Plan was given by Dr. Charles Dukes of Oakland. In his talk Doctor Dukes pointed out the method adopted by Alameda County in handling indigents and those of limited means. The talk was well received by the members.

The society went on record as endorsing a campaign that is to be started by the Vallejo Tuberculosis Association early next September. It is the plan of the Vallejo Tuberculosis Association to try to launch a campaign in an attempt to uncover any tuberculosis that may exist among the pupils of the Vallejo high schools.

The society went on record as favoring a joint meeting with the members of the Contra Costa County Medical Society in June, the meeting to be held in Vallejo.

It was also decided to have a medical program put on by the University of California medical staff some time in the fall, the date to be announced later.

A communication was read from the Napa County Medical Society asking the attitude of our society upon their new x-ray fee schedule, which they had adopted and forwarded to the Industrial Accident Commission and the State Compensation Insurance Fund. After a discussion the society went on record as endorsing the Napa County schedule.

It was moved and seconded that the Solano County Bar Association be invited to be guests of the Solano County Medical Society at a joint meeting to be held in the fall. The subject of *Medical Defense* will be the topic of the evening, and it is hoped to have Dr. B. W. Black, medical superintendent of the Alameda County Hospital, as the guest speaker.

A discussion on the care of indigent patients was carried on by the society members and County Supervisors Sheveland, Danielson and Birchmore. Various difficulties from the physicians' and from the supervisors' standpoints were brought out and discussed. While there was no definite program adopted, it was

suggested that another meeting be held in the near future, at which time a definite program would be adopted.

Announcement was made of a joint meeting with the Napa and Solano County dental societies, to be held at the Hotel Casa de Vallejo at 8 p. m. on May 8. It was announced that this would be a dinner meeting and would be followed by a program of speaking.

AMBROSE J. RYAN, *Secretary*.



SONOMA COUNTY

The Sonoma County Medical Society held its meeting for the month of April at the Occidental Hotel in Santa Rosa on April 12, Dr. E. J. Finnerty of Sonoma presiding.

Dr. Montague S. Woolf and Dr. T. Mullen of the University of California Medical School were the guest speakers. Dr. Woolf's paper on *Cancer of the Rectum* was illustrated by motion pictures. Doctor Mullen spoke on *Cancer of the Stomach*. The papers of the guest speakers were highly appreciated by the society.

The application of Dr. L. W. Hines for membership was favorably acted upon and he was welcomed into the society.

The May meeting will be held as a clinic at the Sonoma State Home. W. C. SHIPLEY, *Secretary*.



TULARE COUNTY

A stated meeting of the Tulare County Medical Society was held on the evening of March 25 at 6:30 o'clock. Dinner was served at Motley's Confectionery.

Dr. Donald Fowler, president, presided. There were present twenty-five members and guests.

An application for membership was received from Dr. Charles M. Matthias of Tulare, and he was invited to attend our meetings pending approval of his application.

Doctors Betts, Cohn and Guido reported their various experiences while attending the recent sectional meeting of the F. A. C. S. held in Los Angeles. The report was enjoyed by all who were unable to attend and stimulated interest in attending other medical meetings.

The program for the evening was presented by Dr. John V. Barrow, professor of medicine at the College of Medical Evangelists. His subject was *Clinical Amebiasis*. The paper was supplemented by motion picture demonstration of the living ameba, a work in which Doctor Barrow has pioneered.

General discussion and questioning followed the paper.

KARL F. WEISS, *Secretary*.



VENTURA COUNTY

The regular monthly meeting of the Ventura County Medical Society was held at the County Clinic Building of the Ventura County Hospital on Tuesday, March 13.

Doctor Osborne was program chairman and presented Mr. Max Heinzman and Doctor Maulhardt, who gave very interesting talks on our local *County Health Problems*.

At the business meeting that followed, the application of Doctor Stoll of Oxnard was read and it was sent to the state society for approval. The reports of the Public Relations Committee were then given. Doctor Coffey, chairman, reported that he attended the meeting of the Public Health League in Los Angeles on March 16. He commented on various activities of the League and the good work it is doing.

A letter from Doctor Livingston of Oxnard was read, submitting his resignation, stating that he has retired from practice.

FRED A. SHORE, *Secretary*.



YUBA-SUTTER COUNTIES

On April 10 the Yuba-Sutter County Medical Society met at the Marysville Hotel, Marysville.

There was a full attendance of all regular members and visitors from Chico, Colusa, Williams, and other near-by towns.

The following resolution on the death of Dr. Gray was unanimously passed by the Yuba-Sutter County Medical Society:

Whereas, Death has removed from our midst our esteemed colleague and friend, Dr. Allen E. Gray; and

Whereas, Doctor Gray was a superb representative of the ethical practice of medicine, a keen up-to-date student, a careful, considerate consultant, frequently our personal medical adviser, and the adviser of our families, a sincere friend that we shall sadly miss; now, therefore, be it

RESOLVED, By the Yuba-Sutter Medical Society that we adopt these resolutions in his memory by a standing vote; that a copy be sent to Mrs. Allen E. Gray; that a copy be spread upon our records; and that another be sent to CALIFORNIA AND WESTERN MEDICINE.

Dr. Bernard Kaufman of San Francisco read a paper on *Anginal Pain*, which was illustrated with x-rays. The benefit of his personal experiences was brought into this lecture. A vote of thanks was extended to Doctor Kaufman by the society. Dr. Neal M. Loomis was voted a member on transfer from Marion, Indiana.

F. W. DIDIER, *Secretary*.

CHANGES IN MEMBERSHIP

New Members (57)

Alameda County.—Burton W. Adams, Nicholas J. Clecak, Frederick G. Novy, Richard A. Young.

Butte County.—W. B. Johnson.

Fresno County.—William H. McGehee, Bernard M. Sorauf, Lloyd B. James.

Humboldt County.—Francis M. Bruner.

Lassen-Plumas County.—Fred Jay Davis, Jr.

Los Angeles County.—

Harry E. Bicknell	Irving L. Josephs
Edward W. Bodman	Raymond W. Kelso
H. L. Charles	James O. Lindsey
George K. Dazey	Robert D. Mace
M. A. Desmond	Walter W. Manton
Stephen B. Devin	Mark Mizener
Dorrell G. Dickerson	S. Gordon Ross
Alvin W. Folkenberg	R. A. Steere
Henry F. Gallagher	Alfred D. Trotter
Robert B. Haining	

Marin County.—Theodore C. Harper.

Monterey County.—Gustav Eberhardt.

Riverside County.—Alexander H. Conrad, Curtis C. Hambo, Alfred M. Tunnell.

Sacramento County.—Viggo W. Pallesen.

San Bernardino County.—Charles J. Clock, C. A. Love.

San Diego County.—H. W. Dickerson, Alice L. Kelly, Everett M. Stone.

San Francisco County.—Herman V. Allington, A. A. Gilman, Edward M. Bixby, Charles A. Noble, Jr., Max H. Teitler, Thomas A. Wong.

San Mateo County.—Harry E. Mason, Robert F. Montieth.

Santa Barbara.—Bard S. Berry, George H. Morris.

Santa Clara County.—Leslie B. Magoon.

Siskiyou County.—Edwin R. Cole, William H. Haines.

Sonoma County.—Carroll B. Andrews.

Stanislaus County.—Lillie A. Arnett.

Ventura County.—George L. Cody, William E. McCoy.

Transferred (12)

Herman V. Allington, from San Francisco County to Alameda County.

Milton B. Bransford, from Yolo - Colusa - Glenn County to Solano County.

Leonard J. Brunie, from Santa Barbara County to Los Angeles County.

Yolanda S. Brunie, from Santa Barbara County to Los Angeles County.

Ernest C. Foster, from Fresno County to Kings County.

Thomas P. Gocher, from San Francisco County to Marin County.

Ruth H. Hubbert, from Los Angeles County to San Luis Obispo County.

Guy L. Kay, from Orange County to Shasta County.

Frank E. McCullough, from Sacramento County to Alameda County.
J. Norman O'Neill, from San Diego County to Los Angeles County.
John T. Perry, from Fresno County to Kings County.
Ernest P. Wheeler, from Los Angeles County to Fresno County.

Resigned (4)

Charles T. Hayden, from San Francisco County.
Alma Nemir, from San Francisco County.
C. A. Queirolo, from Alameda County.
Margaret Wythe, from Alameda County.

In Memoriam

Bacon, David N. Died February 12, 1934, age 72. Graduate of Chattanooga Medical College, 1892. Licensed in California in 1900. Doctor Bacon was a member of the Kern County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.



Gray, Allen Earl. Died March 16, 1934, age 46. Graduate of Cooper Medical College, San Francisco, in 1911 and licensed in California the same year. Doctor Gray was a member of the Yolo-Colusa-Glenn County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.



Klutho, John Cornelius. Died March 16, 1934, age 59. Graduate of Missouri Medical College, St. Louis, 1898. Licensed in California in 1914. Doctor Klutho was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.



McCarty, Isaac A. Died March 23, 1934, age 75. Graduate of St. Louis College of Physicians and Surgeons, 1883. Licensed in California in 1889. Doctor McCarty was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

OBITUARIES
James T. Watkins
1871-1934

Dr. James T. Watkins, one of the leaders in orthopedic surgery on the Pacific Coast, died at his home in San Francisco on February 18, 1934. Doctor Watkins was graduated from the College of Physicians and Surgeons of Columbia University in New York City in 1894. Following a residency in the St. Francis Hospital in New York City, he studied orthopedic surgery with Lorenz in Vienna and with Langer in Munich. Upon his return to the United States he came to San Francisco, and in 1902 was appointed assistant orthopedic surgeon at the Children's Hospital. With this institution he was identified for the major part of his career.

In January, 1907, Doctor Watkins was appointed health officer of San Francisco and later became city physician. His duties after the San Francisco Fire were particularly arduous, and through his efforts public health matters in the city were placed on a sound basis. Actively identified with the American Orthopedic Association, he was honored by its presidency in 1927.

Doctor Watkins was well known to the profession of California and had an exceptionally large number of friends. Frequently he would go to great trouble to do something to please an acquaintance. His presence at medical society meetings always served to enliven the proceedings. He was well versed in the classics and interested in all worthy cultural matters. A loyal member of the profession, Doctor Watkins served his community for many years with distinction and his place in the profession will be difficult to fill.

C. D. LEAKE.

C. M. A. DEPARTMENT OF
PUBLIC RELATIONS*

Socialized Medicine in Canada†

Judging from some of the leading medical journals of the Canadian provinces, the Canadian medical profession is confronted with the greatest crisis in its history, arising from a definite movement, backed in part by the government of some of the provinces, for the socialization of medical service on a wholesale scale.

How the Canadian medical profession has reacted to this impending revolutionary readjustment and what steps it has decided, or will decide, upon to meet the issue are of vital importance to the profession of this country, inasmuch as conditions and environments in Canada and the United States are in some respects similar.

Some aspects of the Canadian situation were analyzed by the editor of the *Vancouver, B. C., Medical Association Bulletin* in a recent issue of that publication. His comments, published herewith in part, should serve as a reminder to the medical profession of this country that social and economic movements, whether they be right or wrong, recognize no geographic boundaries and that the serious problems which now confront our neighboring colleagues may easily become equally as serious issues in our own environs in the not distant future.

"The elections have come and gone, and the world is, we are assured, once more safe for democracy," the Vancouver editor opines.

"And now for King Charles' head once more. What are we, as a profession, going to do next? The present government has put health insurance in its platform, and we do not doubt that it is intending shortly to take steps to bring in as large a measure of health insurance as it can find it wise or expedient to do at this time. What is our attitude to be at this juncture? Should we offer our help and constructive suggestions, or should we adopt the *laissez faire* attitude, and allow things to develop?

"We feel strongly that we should adopt the former position and be ready with an offer of our services and experience. But among the other effects of the depression is a complete realignment of the factors that go to make up the problem of medical care.

"When health insurance was first mooted, years ago, in British Columbia as in other parts of this continent, social conditions were entirely different. The vast majority of people were working, and every person born into the world, at least every male person, was expected to be a working unit as soon as he reached a certain age. It had gone on so long that statistical tables were based on it as an axiom of the social order. It was supposed that our social system was stable and would remain so. Compensation funds, unemployment insurance tables, pension calculations, were based upon a supposed security and certainty of occupation. And health insurance, as a remedy for the undoubted evils of our present system of caring for the sick, was also based on the theory of contribution by all workers to a fund. Due allowance would be made for seasonal unemployment, but that would be all. The actuary could calculate to a dime what the cost would be to the individual and to the state.

"But now an entirely new picture presents itself. Of course, as part of this there is a vast increase in unemployment, but this is not necessarily permanent, though at the moment it seems to be heading in that direction. But that is not the whole of the story. The past few years have shown us that our social structure is not so stable nor so sound as we had thought. Unemployment is not only seasonal, nor due to the laziness of the worker. It is due to other conditions of technology, of world trade and tariffs, of inter-

* An open forum for progress notes on the department's activities and for brief discussions on medical economics. Correspondence and suggestions invited. Address Walter M. Dickie, Room 2039, Four Fifty Sutter Street, San Francisco. This column is conducted by the Director of the Department.

† Reprinted from the *Ohio State Medical Journal*, January, 1934.

national relations that have not till recently been clearly seen and have not yet been grappled with, but we may be sure of one thing, that unless these problems are faced and solved in the very near future, it is going to go very hard with our civilization and with us.

"So that the question again arises in our mind, 'Is health insurance an adequate solution?' or must we dig deeper? Is it not possible that we shall have to go more to the root of the matter and try to think out a scheme which will be more suited to any rearrangement of the elements in our social compound?"

"We think so, and we think, too, that we should, in honesty and fairness, dig deeper into our own problem of the practice of medicine as a whole. We must clean house. We must remove certain of the barnacles which have grown on the good ship's keel. We cannot altogether justify or seek to perpetuate some of the present-day conditions of medical practice. We know, let us be honest about it, that there are many things today which make it difficult for us to be always perfectly honest with our public."

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION*

Component County Auxiliaries

Alameda County.—The March 16 meeting of the Woman's Auxiliary of the Alameda County Medical Association was held at the Women's Athletic Club. Mrs. James Eaves was luncheon hostess, and was assisted by Mrs. A. W. Henry and her committee. Mrs. C. W. Bice was in charge of reservations for the day.

After luncheon there was a business meeting followed by a round-table discussion, of which Mrs. Harold Trimble is chairman. The subjects were: *Our Relation to the Community Chest*; *Our Relation to the County Hospital—How It Functions and What It Does*; *Our Relation to the Children's Hospital*; and *Our Relation to the Tuberculosis Association*. Mrs. Leonard Barnard reported the successful coöperation of the Auxiliary in the Community Chest drive.

Miss Mildred Baldwin gave several delightful vocal selections, and was accompanied by Mrs. Grace Eberhart on the piano, after which our speaker of the day, Mrs. William Palmer Lucas, was introduced. Her talk on *Our Responsibility as Citizens in the Changing Economic Order* was entertaining as well as instructive.

Los Angeles County.—In the Los Angeles County Auxiliary, the month of March was well sprinkled by committee teas, where plans and the coffee-kettle simmered happily together. These have proved a pleasant way of uniting work and the amenities, airing ideas, dividing tasks to be done and sharing joys of the goals won. Mrs. William A. Swini, as membership chairman, is director of our largest committee, heading a group of co-workers whose fine efforts have brought our roster to well over three hundred.

On March 12, Mrs. Mark Albert Glaser, the *Hygeia* chairman, was hostess at a campaign tea for her committee. In a discussion on the best means of promoting *Hygeia*, it was agreed that each member there would try to secure five subscriptions at the bargain rate of a \$1.25 each. This price was made possible by the Auxiliary forfeiting the regular commission. Fifty per cent of the quota of subscriptions was soon paid and more are coming in constantly. As guest speaker,

* As county auxiliaries to the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Thomas J. Clark, chairman of the Publicity and Publications Committee, 40 Ross Circle, Oakland. Brief reports of county auxiliary meetings will be welcomed by Mrs. Clark and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate one page in every issue for Woman's Auxiliary notes.

Dr. Margaret Farr-Hara keenly interested all there with her talk on her recent trip to the penal institutions of Mexico on the Tres Marias Islands.

Mrs. John J. Barrow, president of the Los Angeles Auxiliary, arranged for the regular meeting on March 27 a most interesting tour through the new Los Angeles County Hospital, one of the finest institutions of its kind, recently completed at a cost of some \$13,000,000. Superintendent Martin welcomed the Auxiliary members in the auditorium, where Mr. Ben Read, secretary of the Public Health League, in his address on current medical legislation brought out clearly the pressing need of alertness and intelligent action on the part of the profession. Under the kind guidance of Mr. Gustav Olson, assistant superintendent, typical units on several of the twenty floors were visited, as well as the surgery, the library, record rooms, and the vast and immaculate kitchens. At four o'clock, tea was served, with the chef and chiefs of commissary assisting hospitably at the refreshing rites, which brought to a close an exceptionally worthwhile day.

MRS. ELMER BELT, *Corresponding Secretary.*

Orange County.—The Woman's Auxiliary to the Orange County Medical Association held its regular meeting at the home of Mrs. Harry Zaiser at the Orange County Hospital, with Mesdames F. L. Chapline, E. M. Beasley, and W. S. Wallace as assisting hostesses.

Mrs. Ray Green, chairman of the Committee on Public Relations, reviewed a report from the County Medical Association of the findings of the Economic and Public Relations Committees, stating the results of their study of plans presented by various insurance companies to establish their systems of health insurance in Orange County. Up to date the Association has not felt justified in sanctioning any of the plans presented.

Mrs. D. R. Ball, program chairman, introduced Miss Julia Salisbury, instructor of the Nurses' Training School at the Orange County Hospital. She directed a program presented by a group of student nurses, who told in detail of their course of study as they progressed through the two years of the training school. Miss Coralie Derr first told of the high qualifications necessary for entrance to the training school. Three young women followed, appearing in the uniforms of their respective ranks, and told of what was expected of the students of each class.

On adjourning, the members enjoyed, as usual, the friendly tea hour about a tea table.

Riverside County.—An opportunity to observe the benefits to be derived by crippled children from the Community Hospital orthopedic pool was given doctors' wives at the last meeting of the Auxiliary of the Riverside County Medical Society.

Doctor Barnard, of the Los Angeles Orthopedic Hospital, was present for the meeting and stressed the benefit to be derived from such treatment, not only from the viewpoint of the crippled child, but from the public standpoint, in assisting children to overcome their weaknesses and become self-supporting citizens instead of helpless cripples and wards of their communities.

Miss Melba Wilson, who teaches these children their school work in their own homes, also spoke of the need for an orthopedic school. She stated that if there were facilities at the hospital the children would be able to have more of the teacher's time and instruction, and they would be encouraged by seeing other children strive to overcome their handicaps.

Sacramento County.—The regular meeting of the Woman's Auxiliary to the Sacramento Society for Medical Improvement was held Tuesday evening, March 20, at the home of Mrs. G. Parker Dillon, Mrs. Howard Hall presiding. Mrs. Krull reported that over 250 books were in use at the County Hospital.

Mrs. Hendersen, state president, could not be present, so she asked Mrs. Scatena to speak for her about

the coming state society convention. Mrs. Hendersen was commended for her efforts in bringing about the "health program" of lectures over the radio which has been started in Sacramento, under the adult education work, and through which teachers will be given employment.

It was voted to accept Mrs. Recker's invitation for the April meeting to be held in Placerville, with the Placerville members as hostesses.

After the business meeting the guests enjoyed bridge, which was followed by refreshments.

MRS. FRANK P. BRENDL,
Corresponding Secretary.

San Diego County.—At the January meeting of the Woman's Auxiliary to the San Diego County Medical Society, plans were made for a benefit musical tea which will take the place of the regular meeting in April. The proceeds of this affair will go to the Crippled Children's Fund.

Dr. Anita Muhl, prominent local psychiatrist, spoke to the auxiliary on *Mental Hygiene*.

ELIZABETH EAGER, Secretary.

San Joaquin County.—The Woman's Auxiliary to the San Joaquin County Medical Society held its March meeting at the home of Mrs. S. F. Priestly, Stockton.

Dr. J. H. Toner, director of the Department of Institutions, read a paper on *What the State Is Doing for Its Misfits*. He described a mental hospital as a colony of individuals who are unable to make a normal adjustment to their social environment, and the aim of those in charge to create a social life within the walls of the institution corresponding as closely as possible to the external world. He stated that 45 per cent were discharged or returned to their families; of these, only a small percentage were in the hospital more than a year. He emphasized the importance for early recognition of mental disorders and early treatment; also that a successful state program is dependent upon an adequately informed public along mental hygiene lines, and urged the members to visit the state institutions and know what is being done for the welfare of the patients. He paid a fine tribute to Doctor Smyth, medical director and superintendent of the Stockton State Hospital, the only woman holding such a position in America.

ELLA B. CONZELMANN, R. N., Secretary.

NEVADA STATE MEDICAL ASSOCIATION

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E. E. HAMER, Carson City.....President-Elect
J. N. VAN METER, Las Vegas First Vice-President
W. H. FROLICH, East Ely Second Vice-President
HORACE J. BROWN, Reno.....Secretary-Treasurer

COMPONENT COUNTY MEDICAL SOCIETIES

WASHOE COUNTY

The regular meeting of the Washoe County Medical Society was held in the State Building on the night of April 10, H. A. Paradis, president, presiding.

After discussing various matters of business pertaining to the society, the papers for the evening were presented for discussion. The first paper, *General Consideration in Fracture Cases*, by Dr. Donald Maclean of Reno, was followed by an extempore discussion on *Consideration of Fractures of the Hip Joint* by Dr. Horace J. Brown of Reno.

Doctor Maclean said in part: "In the past thirty years a widespread mechanization has taken place in this country, not only in industrial communities, but an intimate feature in the daily affairs of most people. This machine age has vastly increased the risk of injury in the pursuit of our daily life. This increase of injury, common to both industry and civil life, has

developed a special line of traumatic surgery to meet the requirements. Today, in the United States, it is estimated that there are from 500,000 to 1,000,000 fractures occurring annually. The type of fractures, instead of being of the usual simple variety, have become more complex in their nature. This social and industrial condition makes the treatment of fractures today an outstanding surgical problem. Before the days of the x-ray the treatment of fracture was a simple matter. The fracture was pushed and pulled and pried into position and held by a retaining splint; the simpler the treatment the better. In the case of femurs and other long bones some attempt at extension was made. The strange fact was non-union seldom occurred and the functional result obtained was usually good. Today non-union is of common occurrence and in the end-result of function is rarely perfect."

Doctor Maclean said that fifty years ago the theory prevailed that non-union was due to the severity of the original injury, and this statement is probably correct. Within the last generation the treatment of fractures by metal plates has become prominent as well as new methods of obtaining extension by the use of pins and Balkan frames with the pulleys and weights. In the treatment of all fractures the essential element which the surgeon must possess is a definite knowledge of the anatomy and the physiology of the affected parts. Extension and reduction should be made manually wherever possible and the sense of touch of the surgeon should determine the longitudinal and lateral position of the corrected parts. The general treatment of fractures consists first in the accurate diagnosis of the parts involved.

(In this day of legal entanglements the surgeon must protect himself, always resorting to x-ray and in many cases also to consultation to back up his treatment. With shyster lawyers whose solemn looks and spurious sympathy in behalf of the client can damage a surgeon's reputation beyond repair if not upheld by supporting counsel of his confères.)

Accurately taken and properly read x-ray pictures and proper reduction and proper retention are the essential treatments of the fracture based upon the anatomic knowledge of the parts involved. In nearly all cases a general anesthesia is necessary. (A patient who refuses to submit to anesthesia as an aid in reduction should immediately be told by the surgeon to seek another doctor, thereby avoiding any legal complication which might ensue if a proper function is not obtained.)

In conclusion Doctor Maclean said that no compound fracture should ever be operated upon until all chance of infection had subsided. Better a deformed bone than a low-grade osteomyelitis entailing suffering and disability with a final possibility of a greater deformity than would have occurred if the parts had been allowed to heal of their own accord.

In the discussion of Doctor Brown's talk of hip-joint fractures, Dr. J. L. Robinson brought out the historical fact that Dr. Maxwell of Keokuk, Iowa, was the originator of the cardinal principle of abduction of the thigh and flexion of the leg at the knee joint. This position usually reduced the fracture as nearly as it could be reduced by putting the leg in a position of anatomic and physiologic rest.

This concluded the business of the meeting. A good attendance was present.

THOMAS W. BATH, Secretary.

Let the old, gripped by baseless and adamantine food prejudices, continue in their dietary abominations. Many of their organs are already marked for the grave and, at most, their efforts to think result only in a rearrangement of their prejudices. But do spare our children from such prejudices, to the end that they may grow up sounder of mind and limb and, therefore, more able to carry on the burdens that we will surely hand to them. And who knows but what dietary intelligence among the children may in some small way seep through to their parents.—George H. Bigelow, M. D.

MISCELLANY

Under this department are ordinarily grouped: News; Medical Economics; Correspondence; Twenty-five Years Ago column; Department of Public Health; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings

American Association for the Study of Goiter, Cleveland, June 7 to 9, 1934. J. D. Yung, M. D., Secretary, 670 Cherry Street, Terre Haute, Indiana.

American Medical Association, Cleveland, Ohio, June 11 to 15, 1934. Olin West, M. D., Secretary, 535 North Dearborn Street, Chicago, Illinois.

Medical Broadcasts*

American Medical Association Health Talks.—The American Medical Association broadcasts on a coast to coast network each Monday afternoon from 4 to 4:15 central standard time (5 o'clock eastern standard time, 3 o'clock mountain standard time, and 2 o'clock Pacific standard time).

The Association broadcasts on a western network of the Columbia Broadcasting System each Thursday afternoon on the Educational Forum from 4:30 to 4:45 central standard time.

San Francisco County Medical Society.—The San Francisco County Medical Society broadcast program for the month of May is as follows:

Tuesday, May 1—KJBS, 11:15 a.m., and KFRC, 1:15 p.m. Subject: Unseen Enemies of Children's Health.

Tuesday, May 8—KJBS, 11:15 a.m., and KFRC, 1:15 p.m. Subject: Mental Hygiene in Home and School.

Tuesday, May 15—KJBS, 11:15 a.m., and KFRC, 1:15 p.m. Subject: Teaching Children to Like Wholesome Foods.

Tuesday, May 22—KJBS, 11:15 a.m., and KFRC, 1:15 p.m. Subject: The Nervous Child.

Tuesday, May 29—KJBS, 11:15 a.m., and KFRC, 1:15 p.m. Subject: The Heart of the Adolescent.

Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of May is as follows:

Tuesday, May 1—KECA, 11:15 a.m. Subject: Health Talk.

Thursday, May 3—KFAC, 9:15 a.m. Subject: Your Doctor and You.

Saturday, May 5—KFI, 9:15 a.m. Subject: Health Talk.

Tuesday, May 8—KECA, 11:15 a.m. Subject: Health Talk.

Thursday, May 10—KFAC, 9:15 a.m. Subject: Your Doctor and You.

Saturday, May 12—KFI, 9:15 a.m. Subject: Health Talk.

Tuesday, May 15—KECA, 11:15 a.m. Subject: Health Talk.

Thursday, May 17—KFAC, 9:15 a.m. Subject: Your Doctor and You.

Saturday, May 19—KFI, 9:15 a.m. Subject: Health Talk.

Tuesday, May 22—KECA, 11:15 a.m. Subject: Health Talk.

Thursday, May 24—KFAC, 9:15 a.m. Subject: Your Doctor and You.

* County societies giving medical broadcasts are requested to send information as soon as arranged (giving station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

Saturday, May 26—KFI, 9:15 a.m. Subject: Health Talk.

Tuesday, May 29—KECA, 11:15 a.m. Subject: Health Talk.

Thursday, May 31—KFAC, 9:15 a.m. Subject: Your Doctor and You.

American Association for the Study of Goiter.—With headquarters at Wade Park Manor, in Cleveland, Ohio, on June 7, 8, and 9, 1934, a four-day program will be presented. Members of the profession who are interested in this subject are invited to attend.

American Medical Golfers.—The American Medical Golfing Association will hold its twentieth annual tournament at the Mayfield Country Club in Cleveland on Monday, June 11, 1934. All male Fellows of the American Medical Association are eligible and cordially invited to become members of the American Medical Golfing Association. The executive secretary is Bill Burns, 4421 Woodward Avenue, Detroit.

Some Important State Election Dates:

March 21—Registration books open for primary election.

May 31—First day upon which candidates for office may file their nominations.

June 23—Last day upon which candidates for office may file their nominations.

July 17—Last day for filing initiative petitions. One hundred and eleven thousand valid signatures are required to place an initiative measure upon the ballot.

July 18—Last day for registration for the primary election.

August 28—Primary election.

September 27—Last day of registration for the general election.

November 6—General election.

Query—Are you registered?

Ninth Conference of the International Union Against Tuberculosis.—The ninth conference of the International Union Against Tuberculosis will meet in Warsaw, Poland, on September 4, 5, and 6, 1934, under the chairmanship of Professor Pieztrzynski. Reports will be made on three subjects as follows: "Biological Variations of the Tubercle Virus" by Professor Karwacki of Poland; "Tuberculosis of the Bones and Joints" by Professor Putti of Italy; and "The Use and Organization of Tuberculosis Dispensaries" by Professor Leon Bernard of France. The representatives of the United States who will take part in the discussions are: Dr. Esmond R. Long of the Phipps Institute, Philadelphia; Dr. Clarence L. Hyde of the Springfield Lake Sanatorium, East Akron, Ohio; and Dr. B. S. Pollak of the Hudson County Tuberculosis Sanatorium, Secaucus, New Jersey. There will also be an afternoon lecture by John A. Kingsbury of the Milbank Memorial Fund, New York, on "Methods in Further Control of Tuberculosis." Delegates are expected from the forty-three countries represented in the Union. An attractive program of receptions and excursions has been arranged and visits will be made to the chief antituberculosis institutions of Poland.

A special party is being arranged from the United States, and for those who can leave in advance a trip to Russia is scheduled that will permit delegates to arrive in Warsaw in time for the meeting. Further information may be obtained by addressing the National Tuberculosis Association, 50 West Fiftieth Street, New York.

Sight-Saving Classes.—Four universities will offer courses for the training of teachers and supervisors of sight-saving classes this summer (1934), it is announced by Mrs. Winifred Hathaway, associate director of the National Society for the Prevention of Blindness. The courses will be given at:

State Teachers College, Buffalo, New York.
University of Chicago, Chicago, Illinois.
University of Cincinnati, Cincinnati, Ohio.
Teachers College, Columbia University, New York City.

Injuries to CWA Workers.—From the number of inquiries the California Industrial Accident Commission has daily with reference to CWA workers, it is apparent that the public does not understand that CWA workers are treated as employees of the Federal Government and when injured are entitled to benefits under the federal laws as distinguished from the State Compensation Insurance Act. The Industrial Accident Commission of the State of California has no jurisdiction over injuries sustained by CWA workers. It has been held that injuries occurring to CWA workers come under the jurisdiction of the Federal Compensation Commission, and all injury claims arising to CWA workers should be referred to CWA Injury Department, 450 Mission Street, San Francisco.

The Samuel D. Gross Prize.—The Philadelphia Academy of Surgery announces that the \$1500 prize is again offered. Essays will be received in competition for the prize until January 1, 1935.

The conditions annexed by the testator are that the prize "shall be awarded every five years to the writer of the best original essay, not exceeding 150 pages, octavo, in length, illustrative of some subject in surgical pathology or surgical practice founded upon original investigations, the candidates for the prize to be American citizens."

The essays, which must be written by a single author in the English language, should be sent to the "Trustees of the Samuel D. Gross Prize of the Philadelphia Academy of Surgery, care of the College of Physicians, 19 South Twenty-second Street, Philadelphia," on or before January 1, 1935.

Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

A Postgraduate School of Surgery for California.—The long-felt need for a postgraduate school of surgery has been met by the San Francisco Polyclinic and Postgraduate College. Starting some time ago with a small number of students, it has now reached an enrollment of forty, making it one of the largest courses of the kind in the United States.

The work consists of the fundamental subjects of surgical anatomy, pathology, diagnosis, operative technique, etc. This is supplemented by demonstrations on the living by the members of the Polyclinic staff together with a few surgical teachers of recognized ability, including Drs. Emmet Rixford and Sterling Bunnell.

Among the Polyclinic surgical staff are the following: Doctors H. A. L. Ryfkogel, George W. Hartman, George Herzog, Millard R. Ottinger, Karl L. Schaupp, William E. Stevens, Hans von Geldern, and A. J. Zobel.

The continuous course runs for two terms of four months each every year, while the summer course is given for three weeks in June. Membership is limited to graduates of schools approved by the State Board of Medical Examiners. The director of the course is Dr. A. J. Remmel of San Francisco.

Training Course for Health Officers.—The University of California at Berkeley, in coöperation with the Metropolitan Life Insurance Company, is prepared to offer a training course for health officers commencing next May 14. A distinguished faculty has been assembled, and excellent biometric and bacteriologic laboratory facilities are available, as well as access to well organized urban and rural health departments where practical field observation and training can be had. The course will be practical in every sense of the work.

Guiding the Adolescent.—The Children's Bureau of the United States Department of Labor has issued a new bureau publication (No. 225) entitled "Guiding the Adolescent," by D. A. Thom, M.D., Director of the Division of Mental Hygiene in the Massachusetts Department of Mental Diseases and Director of the Boston Habit Clinics. This publication is of great value to parents of adolescents and to public health nurses who are employed in school nursing among students of high school age. Parents will find Doctor Thom's recommendations particularly helpful.

Hard Times and Birth Rates.—According to the Milbank Memorial Fund, wage-earning families who suffered serious loss of income on account of the depression had 39 per cent more babies in the period 1929-1932 than their neighbors whose incomes were not reduced following 1929. At the same time there was 50 per cent more illness in families whose incomes dropped most sharply than in families who were not seriously affected by the depression.

These findings were based on a house-to-house canvass of eight thousand families in eight typical cities, just completed by the Milbank Memorial Fund in coöperation with the United States Public Health Service.

Rattlesnake Bites.—The weekly bulletin of the California Department of Public Health recently printed the following concerning rattlesnake bites:

To Prevent Snakebite

Wear high boots, high shoes or heavy leggings when walking through snake-infested territory.

Exercise care in reaching for an object or picking up an object from the ground, and in climbing rocks be sure that the hands are not placed in the vicinity of a snake.

What Not to Do

Do not run or get overheated.

Do not take any alcoholic stimulants, because circulation increased by alcohol, or by exercise, serves to distribute the poison through the body much more rapidly.

Do not injure the tissues by injecting permanganate of potash, which is now known to be of no value as an antidote.

Do not cauterize the site of the bite with strong acids or caustics.

Do not depend upon "home remedies" or "snake-bite cures," for they are absolutely of no value.

What to Do

Carry a clean, sharp knife or razor blade when in snake-infested territory.

After making proper incisions at the site of the wound, apply suction and continue for at least half an hour.

Apply a tourniquet above the site of the wound, releasing same every ten or fifteen minutes for about a minute at a time.

If the proper antivenom serum is available, apply it according to directions, but most important of all is to remove as much of the poison as is possible so as to prevent its absorption.

Secure the services of a physician at the earliest possible moment.

TWENTY-FIVE YEARS AGO*

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. VII, No. 12, May, 1909

From some editorial notes:

San Jose Meeting.—"The San Jose meeting of the State Society, now a thing of the past, was a distinct success." . . . The president, Doctor Beckett, enforced the rule limiting authors and speakers to ten and five minutes, respectively, and once more it was demonstrated to be a very wise rule. The newly elected president, Dr. James H. Parkinson of Sacramento, is known to most of our members and will undoubtedly guide the society with a sure and a wise head during the coming year. The next meeting will be held at Sacramento, the third week in April, 1910. . . .

Why These Assaults?—In the last legislature were introduced a number of bills affecting the status of those who desire to treat the sick. The naturopaths wanted a law creating a board of examiners in naturopathy; the chiropractics wanted a similar board for their peculiar cult, whatever it may be; there were two bills creating entirely new and original laws to regulate the practice of medicine and of osteopathy, and two more which at the beginning of things merely amended the present law and created reciprocity. . . .

Case in Point.—The legislature amended the present law and compelled the board to endorse certificates from the "Board of Naturopathic Examiners" which had been issued prior to the passage of the amendment. . . . Here is the case of a man who was graduated from some medical school, tried to pass the examination and obtain a license to practice medicine and failed. He joins the naturopaths, possibly after a few weeks' reading, and is subsequently licensed, by the manner described, to practice that cult. He comes into court, shows that he has a degree of M. D. (the court knows not one school from another) and says that he is being "persecuted" because he is a better man than the regular society physicians! . . .

Another Reason.—Another reason for the attacks upon medical standards—and "medical standards" might be written *safeguards against ignorance and quackery*—is one that brings to our own threshold a certain amount of shame; the complete lack of confidence in our profession caused by the eternal differences and squabbles among medical men themselves. . . .

Notable Banquet.—On March 31 a most remarkable thing occurred; the citizens of San Francisco tendered a banquet to a physician and presented him with a magnificent watch. A year and a half ago the same citizens were ready to mob anyone who suggested that there was any necessity for calling upon Doctor Blue or anyone else to fight plague, for the reason that, in their almighty opinion, no plague existed in San Francisco. But all things change; and so did the opinion of these distinguished citizens—including the mayor. . . .

From an article on "Report of President to the House of Delegates" by W. W. Beckett, M. D.

. . . It should be the object of this Association to promote concord and fraternity, unity and strength, the advancement of our knowledge, the protection of

* This column strives to mirror the work and aims of colleagues who bore the brunt of society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

(Continued in front Advertising Section, page 11)

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA*

By CHARLES B. PINKHAM, M. D.
Secretary-Treasurer

Results of Board of Medical Examiners' Examination, Los Angeles, February 27 to March 1, 1934.—The examination covered nine subjects and included ninety questions for physician and surgeon applicants. An average of 75 per cent is required to pass. Sixty-four graduates of medical schools wrote the examination, including several from foreign countries.

The highest mark (91 5/9 per cent) was made by James Willis Callaway, Tomahawk, Wisconsin, a graduate of Northwestern University Medical School, Chicago, Illinois, December 27, 1932.

Fifty-six applicants passed, and eight failed.

The following institutions were represented:

PASSED		
College	Year of Graduation	Per Cent
College of Medical Evangelists.....	1933	86 5/9, 84 6/9
	84 3/9, 86 8/9, 84, 88 3/9	
Columbia University of Physicians and Surgeons	1933	89 4/9
Cornell	1933	88 6/9
Creighton	1933	78 4/9, 86 4/9
Friedrich Wilhelm University of Berlin, Germany	1924	73 6/9
8 per cent year's practice equals		81 6/9
George Washington University	1930	86 5/9
	1933	86 1/9, 87 7/9
Indiana University	1931	82
Jefferson	1933	90 2/9
Marquette	1933	87 1/9
McGill University Faculty of Medicine, Canada	1932	82
	1933	85, 88
Medical College of the State of South Carolina	1933	86 8/9
Meharry	1932	85 3/9
Northwestern	1932	91 5/9, 86 8/9
	1933	88 4/9
Ohio University	1933	87 1/9
Rush	1933	84 2/9, 88 5/9
Silesian Friedrich Wilhelm University of Breslau, Germany	1926	76 3/9
Temple University	1932	85 4/9
University of Arkansas	1933	84 1/9
University of Berlin, Germany	1925	82 4/9
University of California	1932	87 4/9
	1933	86 4/9
University of Cincinnati	1933	86 2/9
University of Colorado	1933	82 8/9
University of Illinois	1933	89 6/9
	1934	80 3/9
University of Iowa	1933	81 7/9, 83
University of Kansas	1933	86 4/9
University of Michigan	1932	86 3/9
University of Minnesota	1933	87 8/9, 91 2/9
University of Nebraska	1933	81
University of Oregon	1933	84 5/9, 83 5/9
	90 1/9, 85 1/9, 89 5/9, 85 4/9	
University of Toronto, Canada	1906	80 1/9
University of Wisconsin	1933	85 1/9
Washington University	1933	88 7/9, 87 5/9
		85 8/9

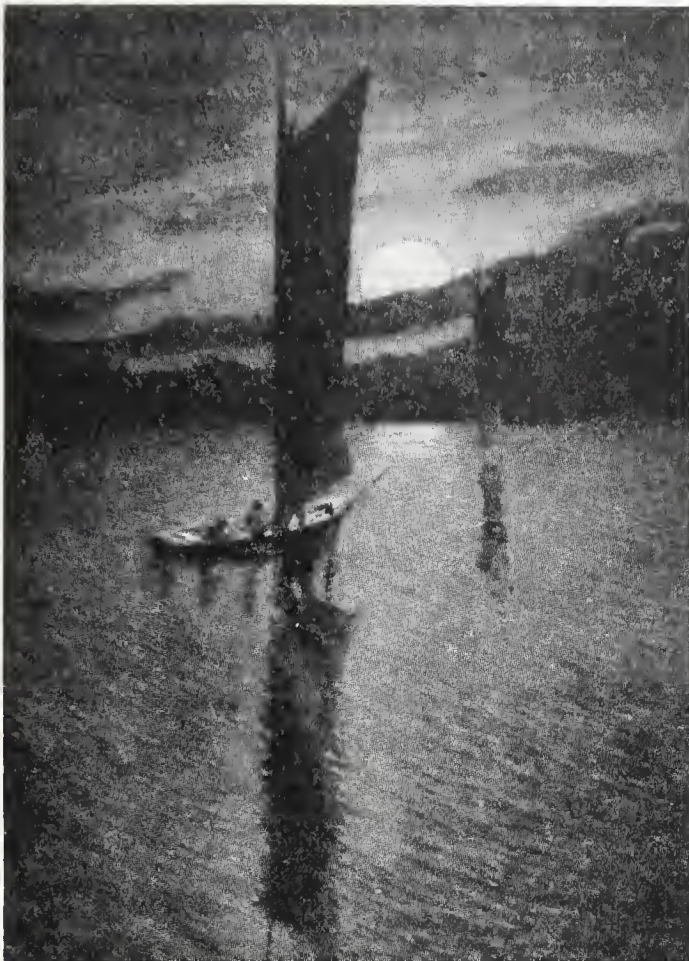
FAILED		
College	Year of Graduation	Per Cent
American Medical Missionary College.....	1902	63
Hahnemann Medical College of Philadelphia	1902	57 2/9
Loyola	1915	65 3/9
University of Frankfort, Germany.....	1926	52 8/9
University of Frankfurt on Main, Germany	1927	69 4/9
University of Illinois.....	1931	71 5/9
University of St. Thomas Faculty of Medicine and Surgery, Manila, P. I.....	1924	68 5/9
University of Strasbourg, Germany.....	1900	57 7/9

LICENTIATES

Hermann Abraham, Los Angeles, University of Berlin, Germany.
Thomas Edward Albers, San Francisco, Creighton University School of Medicine, Nebraska.
William Keller Beare, San Francisco, Washington University School of Medicine, Missouri.

* The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.

(Continued in front Advertising Section, page 14)



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(AGENCY)

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Phone TRINITY 8001

An Analysis of Maternal Mortality in California.—A detailed study of the 508 maternal deaths registered in California in 1928 has been completed by Dr. Frances C. Rother of the United States Children's Bureau. The study consists of an analysis based upon detailed information obtained by physicians of the Bureau of Child Hygiene of the California State Department of Public Health. The study was made possible through the coöperation of physicians who signed certificates for maternal deaths during that year. The study had the approval of the California Medical Association, and the Council on Obstetrics of the Association has approved the publication of the report which is abstracted here.

The maternal mortality rate for California in 1928 was 6.1 per thousand live births. There were 83,536 live births and 508 maternal deaths reported in 1928. The urban maternal mortality rate during that year was 64, and the rural maternal mortality rate was 57. Careful study of the maternal deaths during that year reveals the fact that 15 deaths should not have been classified as puerperal. The detailed study, therefore, is based upon 493 deaths. Puerperal septicemia caused 42 per cent, and puerperal albuminuria and convulsions caused 21 per cent of the total number of maternal deaths recorded. The proportion of deaths in the urban areas that was due to sepsis (43 per cent) was higher than that in the rural areas (37 per cent). While albuminuria and convulsions caused a smaller portion of the urban deaths, the differences were not statistically significant. Of the 493 maternal deaths, 183 (37 per cent) occurred before the last trimester of pregnancy. Of the 206 deaths due to puerperal septicemia, 115 (56 per cent) occurred before the last trimester.

Abortions.—Abortion, or beginning abortion, preceded the deaths of 134 (27 per cent) of the 493 women who died from puerperal causes in 1928. In 17 cases the type of abortion was not reported, but 32 of the remaining 117 were said to have been sponta-

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neous, 15 therapeutic, and 70 induced. Of these, 70 were either self-induced or were suspected to have been induced by some other person (criminal). All but 15 of the 134 women whose deaths followed abortions were married; 27 were primiparae and 64 were multiparae, while the parity of 43 was not reported. Eight of the 27 primiparae, 35 of the 64 multiparae, and 27 of the 43 women whose parity was unknown were reported to have had induced abortions. Abortions preceded 102 (50 per cent) of the 206 deaths from puerperal septicemia.

Stillbirths.—The condition of the child at birth was reported for 483 of the 493 women who died from puerperal causes in 1928. Of these 483 women, 496 (97 per cent) had single and 14 (3 per cent) had plural pregnancies. The 97 per cent with single pregnancies included 193 women (40 per cent of the total reporting type of issue) who had given birth to living children, 87 (18 per cent) who had stillborn children of more than seven month's gestation, 164 (34 per cent) who were delivered of previable children, and 25 women (5 per cent) who died undelivered. The 14 women with known plural pregnancies included 10 (2 per cent of the total) with live-born twins, 1 with stillborn twins, 1 with one child born alive and one stillborn, and 2 with both children previable. Only 42 per cent of the total had given birth to one or more live-born children.

Prenatal Care.—Of these 493 women who died, prenatal care was inapplicable to the ninety-eight cases of induced abortion and cases in which pregnancy terminated before the third month. In fifty-two cases no report on prenatal care could be obtained. Of the remaining 343 women, 112 (33 per cent) had no prenatal care whatever. Thus, 231 of the 493 women were known to have had some medical supervision during pregnancy. Of these 343, 69 (20 per cent) had good, or fair, prenatal care, involving general physical examination, pelvic measurements, and regular monthly visits to a physician, beginning with or before the

fifth month. Sixty-one (18 per cent) of the 343 women had a second-grade, or indifferent, prenatal care, consisting of at least a general physical examination and regular monthly visits to a physician, beginning not later than the seventh month. One hundred women (29 per cent) had poor prenatal care, which may have consisted of only a single visit or which may have been care of good quality beginning in the eighth or ninth month.

Operative Delivery.—A report concerning the method of delivery was obtained for 488 of the 493 women who died from puerperal causes in 1928. Of these 488 women, 210 (43 per cent) had had some operative delivery. Cesarean section was the method of delivery in seventy-three cases. The seventy-two women who were delivered by cesarean section in the last trimester constituted 25 per cent of those for whom there were reports on operations who died after reaching the last trimester, a larger proportion than in any of the fourteen other states similarly studied. In the fifteen states together, 11 per cent of the deaths in the last trimester had been preceded by cesarean section.

The physician who actually delivered the patient, or who was in charge of the case if she died undelivered, described his technique in 249 cases. It was described as aseptic in 176 cases (71 per cent of the 249); as attempted aseptic, but under conditions that rendered strict asepsis unlikely, in 23 cases (9 per cent); clean but not sterile in 39 cases (16 per cent), and as not clean in 11 cases (4 per cent). However, in addition to the cases in which the physician was preceded by a midwife or some other person, he was preceded by another physician with less careful technique in fifteen cases in which his own technique was graded as aseptic.

Hospitalization.—Three hundred and eighty-six (78 per cent) of the 493 women died in hospitals. One hundred and six died elsewhere, and the place of one death was not reported. This woman, and 14 of the

(Continued on Next Page)

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(Continued from Preceding Page)

106 who died elsewhere, had entered a hospital, but left it before death. Therefore, 401 (82 per cent) of the 493 women who died of puerperal causes had been hospitalized. There was a larger percentage of hospitalization among women who died in California (81 per cent than among those who died in any of the other states similarly studied, with the exception of Washington, which had the same percentage. Fifty-seven women died in California hospitals that were not registered by the American Medical Association. In the fifteen states studied together, 57 per cent of the women who died had been hospitalized.

Of the 493 women who died, 459 were white and 34 were of other races. Mexicans are grouped with whites, in accordance with the United States Bureau of the Census classification. Three hundred and two (67 per cent) of the white women were native and 151 (33 per cent) were foreign-born.

Summary.—The 508 deaths assigned by the Bureau of the Census to puerperal cause in 1928 were studied by examination of the death certificates and by personal interviews with the attending physicians. Four hundred and ninety-three of the 508 deaths registered were found to be strictly puerperal, but the maternal mortality rate based on 493 deaths (59) may be less accurate than that based on the 508 deaths (61), as deaths erroneously certified as puerperal were subtracted, but deaths erroneously certified as nonpuerperal were not added.

Forty-two per cent of the 493 deaths were due to puerperal septicemia, 21 per cent to puerperal albuminuria and convulsions, 10 per cent to puerperal hemorrhage, 12 per cent to accidents of pregnancy, 11 per cent to other accidents of labor, and 4 per cent to puerperal phlegmasia alba dolens, embolus, sudden death.

Twenty-seven per cent of all the deaths and 50 per cent of the deaths from puerperal septicemia followed abortion (that is, the termination of a previable pregnancy). Fourteen per cent of all the maternal deaths and 31 per cent of the sepsis deaths followed abortions reported as induced, other than therapeutic.

Thirty-seven per cent of the puerperal deaths were of women who died before reaching the last trimester

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of pregnancy. This includes deaths following abortion, deaths following ectopic gestation, and deaths of women who died undelivered.

In studying prenatal care the deaths of women who had not reached the third month of pregnancy, also of women who had induced abortions or concerning whom no data on prenatal care was obtainable, were excluded from consideration. Most of these probably had no prenatal care. Of the remaining 343 women, 33 per cent had had no prenatal care, 29 per cent had had poor care, 18 per cent had had indifferent care, and 20 per cent had had good care.

Of the 310 women who died after reaching the last trimester of pregnancy, 57 per cent were reported to have had operative deliveries. Twenty-four per cent of the deaths in the last trimester had been preceded by cesarian section; this was a larger proportion than that in any of the fourteen other states similarly studied.

Eighty-one per cent of the women who died of puerperal causes had been hospitalized, and 78 per cent had died in hospitals. But only half of those who died in hospitals were women in the last trimester of pregnancy who had been in the hospitals for delivery.

California Industrial Accident Commission.—Two decisions of the Supreme Court are of interest, the first being *Leffert vs. Industrial Accident Commission*, L. A. 14300, wherein Leffert was employed as a salesman for a meat-packing company, and the night before had left his coat at the plant, and upon his return in the morning found the plant was on fire. He turned back to recover his overcoat and while so doing was killed. The court held that since he used the coat occasionally while at work, this act of salvage upon the employer's premises was reasonably incidental to his employment and that injury resulting in death was compensable.

The second case is that of *Employers' Liability Assurance Corporation vs. Industrial Accident Commission*, L. A. 14572. In this case the Commission issued a joint and several award in favor of the injured employee against both the Employers' Liability Assurance Corporation and the Indemnity Insurance Company of North America. The facts were as follows: A policy was issued by the Indemnity Insurance Company to the Atascadero Mill and Lumber Company, through its agent in Atascadero. A notice of cancellation was issued by the carrier, on the ground of failure to pay premium. The employer took it up with the agent, calling to his attention that the premium had been paid, which, incidentally, was not turned over to the company by the agent. However, the agent stated the cancellation was a mistake. After several months, the agent absconded and the employer became fearful and consulted an agent of the Employers' Liability Assurance Corporation, who promised verbally to take care of the employer in case the policy with the In-



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demnity Insurance Company was not in force. This verbal assurance was later embodied in a letter, confirmed by the carrier. No premium was paid, nor policy issued by the Employers' Liability Assurance Corporation. The Supreme Court annulled the award of the Commission as against the Employers' Liability Assurance Corporation, but affirmed it as regards the Indemnity Insurance Company, upon the grounds that the evidence showed the employer did not intend to take out duplicate policies, and also that the policy with the Indemnity Insurance Company had not been effectively canceled.

Last of Pasteur Associates Dead.—Pierre Paul Emile Roux, M. D., director of the Pasteur Institute and last of the bacteriologists closely associated with

(Continued on Next Page)

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(Continued from Preceding Page)

Louis Pasteur, died on November 4—one week after the death of Professor Albert Calmette, assistant director of the institute.

Doctor Roux had been connected with the institute since 1878 and had been director there since 1904. For years he labored side by side with Pasteur and collaborated with him in many important studies, including those on anthrax and the preventive treatment of rabies. He was one of the discoverers of the serum used for the treatment of cholera in India and China. Doctor Roux's greatest contributions were perhaps those made in his work on diphtheria. With Yersin, he first partially isolated the toxin produced by the diphtheria bacillus, and it is to a large extent due to this early work that we now have specific products for diphtheria prevention and treatment. He was engaged with Nocard in researches on pneumonia and made investigations as to the nature, prevention and cure of tetanus, syphilis and other infectious diseases.

Doctor Roux was elected to the Academy of Medicine in 1895, the Academy of Science in 1899, and in 1903 received the Osiris Prize of \$20,000 from the institute.—*Health News*.

Warns Against "Cures" for Venereal Diseases.*—

Self-medication for venereal diseases not only constitutes a serious menace to public health, but it does not help the patient, according to Dr. F. J. Cullen of the Federal Food and Drug Administration. Venereal diseases, including syphilis, gonorrhea, and gleet, are highly infectious and should receive medical attention immediately after infection. Yet, says Doctor Cullen, many fake healers offer to cure these diseases through the use of worthless nostrums which they manufacture.

Just recently, Doctor Cullen states, the federal court for the northern district of Illinois assessed a fine of

* Press service of the United States Department of Agriculture.

\$100 upon Fridolin Pabst, trading as Pabst Chemical Company, Chicago, Illinois, for shipping in interstate trade a nostrum known as "Pabst's Okay Specific." The preparation contained no ingredients which, according to medical opinion, would be effectual in the cure of gonorrhea and gleet, yet the circulars accompanying the article made curative assertions with regard to these diseases. The medicine was misbranded in that the labels on the bottles bore false and fraudulent claims as to the remedial nature of the goods. Quantities of "Pabst's Okay Specific" were shipped to Beaumont, Texas, and San Juan, Puerto Rico. The Government had previously seized the goods.

The recent prosecution of Pabst was not the first one. Several years ago he was fined for a similar offense. In the recent case the court stated that if the defendant, who pleaded guilty, committed another such violation of the Federal Food and Drugs Act, the court would be disposed to impose a jail sentence.

"Persons suffering from a venereal disease should immediately seek competent medical advice as to the treatment of the disease," states Doctor Cullen. "There are free clinics in all cities for the treatment of those unable to pay. Sufferers should not rely upon the advertised claims of charlatans who have worthless nostrums to sell. Nor should they be misguided by false and fraudulent label claims for the goods, nor by assertions made in circulars which commonly accompany these preparations. During the twenty-seven years of enforcement of the national pure food and drug law, the Government has seized large numbers of drug preparations falsely recommended as being worthwhile treatments or cures for venereal diseases."

Dairy Scientists Perfect Method for Recovering Milk Albumin for Baby Food.*—Scientists of the Federal Bureau of Dairy Industry have devised a method

* Press service of the United States Department of Agriculture.

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and a factory-scale apparatus for recovering milk albumin from sweet whey, with the natural properties of the albumin unimpaired. The Bureau estimates that the powdered albumin can be produced for somewhat less than 50 cents a pound and that its chief value would be as an ingredient of modified infant foods, which commonly retail for about a dollar a pound, or for adding to cow's milk to make it more suitable for infant feeding.

The albumin of milk resembles somewhat the albumin of egg and has high nutritive value. Cow's milk, which contains less than half as much albumin as human milk, has a tendency to coagulate in large masses which digest slowly in the infant stomach; whereas human milk coagulates in the stomach in fine flocks and is easily digested. The addition of the powdered albumin to cow's milk serves not only to raise the albumin content but to change the physical properties of the milk so that when it is acted on by the acids of the infant stomach it is coagulated into a finely divided curd much like that of human milk.

At present albumin is produced in connection with the manufacture of commercial milk sugar from whey, but the albumin has little value because its solubility is destroyed in the separation process. By the new method developed by the bureau the sugar may be crystallized from concentrated sweet whey, leaving a mother liquor that contains some of the sugar, most of the minerals, and all the albumin. This liquor may be dried without affecting the solubility of the albumin, but the salt content of the resultant powder is so high that it is not suitable for modifying cow's milk. The scientists found, however, that the greater part of these salts can be removed without affecting the other constituents by subjecting the mother liquor to electric dialysis before drying it, and they have devised an apparatus in which this can be done on a factory scale.



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ROBERT A. PEERS, M. D., *Medical Director*
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BOOK REVIEWS

List of Books Received

BOOKS RECEIVED

Medicine—A Voyage of Discovery. By Josef Lobel, M.D. Translated from the German by L. Marie Sieveking and Ian F. D. Morrow. Cloth. Pp. 334. Price, \$3 net. New York: Farrar & Rinehart, 1934.

Genealogy of Sex. Sex in its myriad forms, from the one-celled animal to the human being. By Curt Thesing, M. D. Translated from the German by Eden and Cedar Paul. Introduction to the American edition by Smith Ely Jelliffe, M. D., Consulting Neurologist of Manhattan State Hospital and Kings Park State Hospital, New York. Cloth. Pp. 286. Price, \$5. New York: Emerson Books, Inc., 1934.

I Know Just the Thing for That! By J. F. Montague, M. D., Medical Director, New York Intestinal Sanitarium, American Association for the Advancement of Science, American Society for the Control of Cancer. Cloth. Pp. 265. Price, \$2. New York: The John Day Company, 1934.

A Practical Treatise on Diseases of the Skin. For the use of Students and Practitioners. By Oliver S. Ormsby, M. D., Clinical Professor and Chairman of the Department of Dermatology, Rush Medical College of the University of Chicago, Dermatologist to the Presbyterian and Saint Anthony's Hospitals, and the Home for Destitute Crippled Children. With Revision of the Histopathology in this Edition, by Clark Wylie Finnerud, B. S., M. D., Assistant Clinical Professor of Dermatology, Rush Medical College of the University of Chicago, Assistant Attending Dermatologist to the Presbyterian Hospital of Chicago. Fourth Edition, Thoroughly Revised. Cloth. Pp. 1288, illustrated with 619 engravings and three colored plates. Price, \$11.50. Philadelphia: Lea & Febiger, 1934.

The Span of Life as Influenced by the Heart, the Kidneys, and the Blood Vessels. By Franklin R. Nuzum, B. S., M. D., F. A. C. P., Medical Director of Santa Barbara Cottage Hospital. Paper. Pp. 108. Price, \$2. Springfield: Charles C. Thomas, 1933.

BOOK REVIEWS

The Story of Childbirth. By Palmer Findley. Pp. 376. New York: Doubleday, Doran & Co. 1933. Price, \$3.

In "The Story of Childbirth," Doctor Findley tries to do for obstetrics what Wells did for history, but has succeeded not so well. The book is a curious combination of folklore, popularized science, and maternity manual. It should make good reading for the expectant mother, who will learn therefrom that all her notions of maternal impressions are wrong, but that she can anticipate more rational treatment at term than her primitive sisters enjoyed. The author tells his women readers that their lives are not jeopardized by bathing during menstruation, and clears up many false notions about childbirth that have been passed on from generation to generation for centuries.

To the casual reader, including physicians, this book would seem to lack unity and to contain many unnecessary repetitions. It impressed this reviewer as a laborious compilation of quotations, in one instance two full pages being in quotes. The style is not smooth and the author often wanders from his subject. One sees no reason to discuss prostitution or the history of anesthesia in this book. The work gives the impression of being carelessly written or proofread, for on pages 172 and 202 there are glaring errors, and on page 59 the negro medicine man is called the "hoodoo" doctor, where the author must have meant "voodoo."

The illustrations, gathered from a variety of sources, are good, especially those showing the numerous positions assumed in labor. Perhaps it is a new style in printing, but it is confusing to see the picture title in capitals and the legends in the same type as the text.

The first chapters, dealing with the folklore of childbirth, are the most entertaining to the medical man. For his women patients, especially if pregnant, some of the later chapters will hold more appeal. There is one entitled "Maternity and Fashions," which will surely please pregnant women who wish to deceive the public as long as possible. In the later chapters the author proves himself an able crusader for birth control and better obstetrics, something sorely needed in the United States.

J. M. R.

MEDICAL BOOKS for JUNE

- Bett: Short History of Some Common Diseases \$3.50
1933 Yearbook of General Therapeutics . 2.25
Key & Conway: Fractures and Dislocations . 15.00
Jacobson: You Must Relax 1.50
Watson-Williams: Chronic Nasal Sinusitis . 5.00

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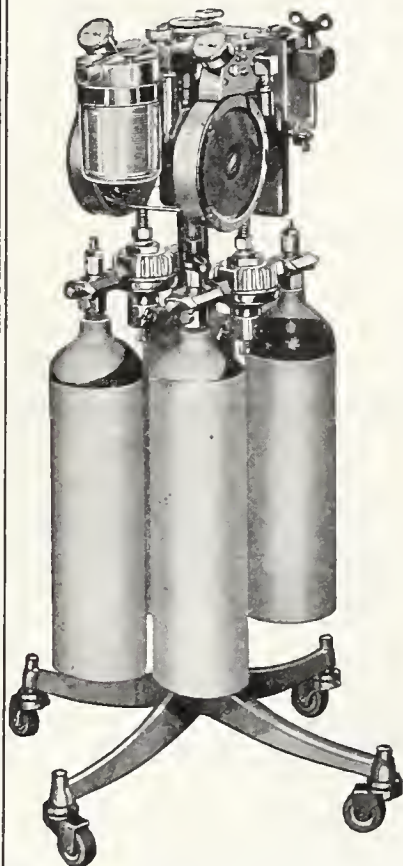
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Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1933. Cloth. Price, postpaid, \$1. Pp. 188. Chicago: American Medical Association.

The main bulk of the volume, which is, incidentally, considerably increased over that of recent annual volumes, is taken up with reports on products which the Council has found unacceptable for inclusion in New and Non-official Remedies. Of special note are: The report on Alpha-Lobelin, a drug upon which the Council in 1927 issued a preliminary report but which is now found not to have established itself as a respiratory stimulant of as great usefulness as carbon dioxide and oxygen; the report on a number of preparations marketed by the Upjohn Company with unwarranted, misleading and unscientific claims; the report on Clavipurin, a preparation of the alkaloids of ergot, marketed without adequate declaration of the composition and without adequate standardization under a nondescriptive proprietary name with unwarranted therapeutic claims; the report on Diampysal, another pyridin derivative proposed for use in bacterial infections, convincing evidence for the therapeutic value of which is lacking; the report on Euphydigital, an irrational mixture of digitalis and a theophyllin preparation marketed under an uninforming proprietary name, with exaggerated

(Continued on Next Page)

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BOOK REVIEWS

(Continued from Preceding Page)

and unwarranted claims for its therapeutic value; the report on Guphen, stated to be the gualaccol ester of phenylcinchoninic acid, marketed with unwarranted therapeutic claims under an uninforming, proprietary name and having no proved advantage over its constituents administered separately; the report on Niazol, a pyridin compound of unsubstantiated value as a urinary antiseptic; the report on Omnadin, a preparation recognized for use for non-specific lipoprotein therapy practically as a cure-all; and the report on a group of endocrine preparations of the Rovin Laboratories variously unacceptable as being of indefinite composition and of undemonstrated therapeutic value.

A feature of marked current interest in this volume is the preliminary report on Alpha-Dinitrophenol, the new drug for acceleration of cellular metabolism. The Council voices a warning on the dangers attending the use of this drug; this warning has been increasingly justified in reports of fatalities since the appearance of the Council's report in July of last year. Other preliminary reports which make this volume one of the most interesting issued by the Council in recent years are those on Dilaudid, a new narcotic drug related to morphin; Fuadin, a new antimony compound for use in the treatment of bilharziasis and granuloma inguinale; and Hippuran, a new product for intravenous and oral urography. The comprehensive and definitive special report on estrogenic substances furnishes a much needed review of the present status of such products in gynecologic therapy. The Council insists upon the doctrine that basic laboratory investigation of these substances should precede clinical use. Of interest to hospital authorities, especially in connection with the book "Hospital Practice for Interns," recently issued by the Council in collaboration with the Council on Medical Education and Hospitals, is the special report, "The Hospital Formulary," by Hatcher and Stainsby of New York. It outlines a plan characterized by the highest regard for the principles of rational drug therapy. Of more general interest is the Council's second report on the intravenous use of barbitol compounds which is the result of a questionnaire sent to representative physicians. In view of the answers to the questionnaire, the Council reaffirmed its previous decision concerning the limitations of intravenous use of barbitol compounds, namely, that these preparations should be administered intravenously only in a limited number of conditions in which administration by other routes is not feasible. The report carefully details these conditions.

(Continued on Page 14)



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BOOK REVIEWS

(Continued from Page 12)

The lengthy report on the omission of Pyridium is an outstanding example of the meticulous fairness characteristic of the Council's treatment of the manufacturers of commercial preparations. In connection with the omission of Pyridium should be noted the report which declares Azophene (Mallophone) not acceptable. This product has been shown to be identical with Pyridium, and the Council considers the claims for its usefulness as a local, general, or urinary antiseptic as unwarranted, as are those for Pyridium.

New and Nonofficial Remedies, 1934, containing descriptions of the articles which stood accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1934. Cloth. Price, postpaid, \$1.50. Pp. 510; lx. Chicago: American Medical Association.

New and Nonofficial Remedies, 1934, has the same pleasing format and helpful mechanism that has characterized it in past years. The enrichment of the indexing started a few years ago is continued and its value even increased by some desirable simplification of cross references.

The Council has made the usual careful revision of the book. The general article, "Lactic Acid-Producing Organisms and Preparations," has been practically rewritten. The chapter on Arsenic preparations has undergone some revision, especially in the statement concerning neoarsphenamin. The descriptions of Chiniofon and Vioform have been revised in the light of recent developments in the treatment of amebiasis. The article on ethylhydrocuprein has been revised to delete references to optochin base, which has been omitted; optochin hydrochlorid has been retained, being recommended only for external use. The description of typhoid vaccine has been revised to give the dosage of the combination of typhoid and paratyphoid organisms and to mention the use of typhoid vaccine in nonspecific protein therapy. A number of revisions of the Council's rules have been made, particularly with reference to the names of products, which is one of the most frequent and troublesome of the problems with which the Council has to deal. Comparison with last year's volume will show that revisions of more or less importance occur in many other chapters.

Among the preparations newly included in this volume are: Aminophyllin, a double salt or mixture of theophyllin and ethylenediamin, with the advantage of greater solubility over other theophyllin preparations; the new alum precipitated diphtheria toxoid; Neo-Iopax, a new medium

for intravenous urography; Benzedrin, an ephedrin substitute; serums containing Type II pneumococcus antibodies, which the Council has recently recognized as worthy of clinical trial in view of improved preparations and technique; Autolyzed Liver Concentrate and Extralin, two new liver preparations for use in the treatment of pernicious anemia; Metycain, a new local anesthetic; and Sodium Morrhuate, a salt of the fatty acids of cod-liver oil, proposed for use as a sclerosing agent.

TWENTY-FIVE YEARS AGO

(Continued from Text Page 480)

From an article on "A Dosimetric Method of Anesthesia by Inhalation," by Carl R. Krone, M. D., Oakland.

The first efforts at dosimetry in inhalation anesthesia were made by Dr. Oscar H. Allis of Philadelphia in 1874 when he described his ether inhaler in the *Philadelphia Medical Times*. I suggest a progressive scale of five degrees of anesthesia but time restriction permits only their enumeration: Status tolerans, status somnolens, status anestheticus, status narcosis, and status comae. . . .

From an article on "Osteo-Arthritis," by S. J. Hunkin, M. D., San Francisco.

It is with some trepidation that I offer for your consideration the subject of osteo-arthritis, and especially the particular form of osteo-arthritis which most frequently attacks the vertebrae, the sacro-iliac joints and the hips. . . .

From an article on "Tuberculosis of the Kidneys," by William Fitch Cheney, M. D., San Francisco.

Tuberculosis of the kidneys is a subject of interest to three different groups of investigators: to the specialist in internal medicine, the specialist in genito-urinary diseases and the general surgeon. The first and the second are concerned particularly with its recognition, the third with its cure. . . .

(Continued on Page 16)

Second-Hand Prescriptions Exchanged Here



IF Mr. Culbertson could eavesdrop during a session of the Homeville Heights Bridge Club—well, he might be mildly shocked at some points in the play...

But, Doctor—his feelings would be nothing to yours if *you* could listen in—and hear the light-hearted way those ladies toss medical advice about!

And when the talk turns to infant feeding—how they love to trade their pet prescriptions! For some strange reason, almost everybody enjoys meddling with the feeding instructions a young mother gets from her physician.

A baby's best defense against these well-meaning meddlers is—his doctor's explicit formula. And if that formula calls for evaporated milk, it's well worth while, for safety's sake, to specify the brand. You know that only certain brands of evaporated milk measure up to your high standards—and that Borden's *always* does. Every step in its preparation—from the selection of the raw milk through the final sterilization—is rigidly supervised under skilled laboratory control.

May we send you a simple, compact infant-feed-

ing formulary, and other strictly professional material which we believe you will also find interesting and valuable? Address The Borden Company, Department CA64, 350 Madison Avenue, New York City.

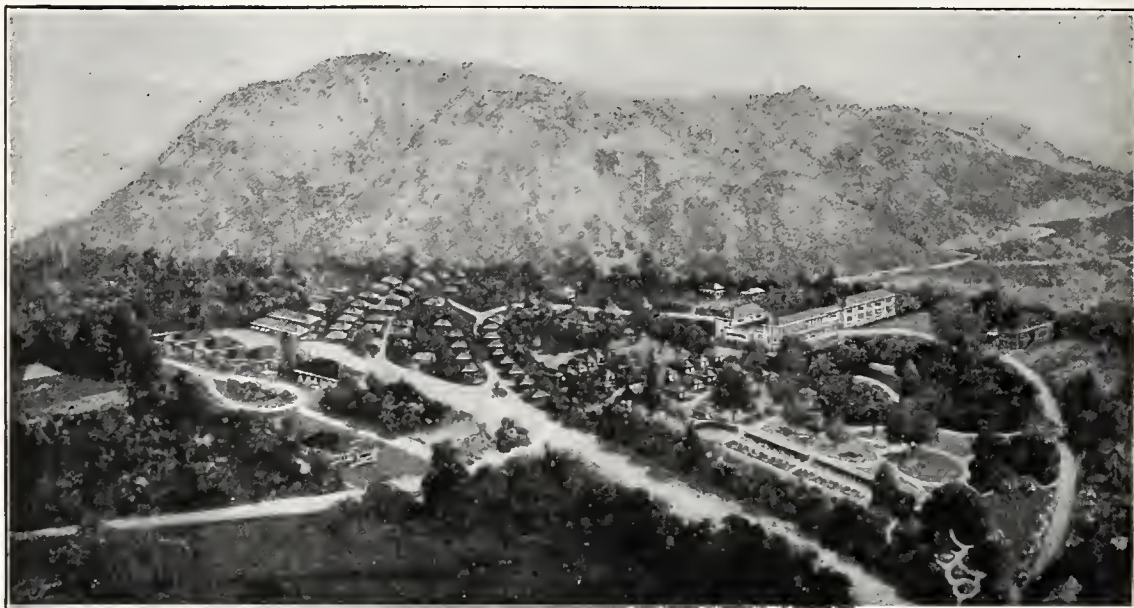


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TWENTY-FIVE YEARS AGO

(Continued from Page 14)

From an article on "The Differential Diagnosis of Tubercular Meningitis," by George E. Ebright, M.D., San Francisco.

Typical cases of tubercular meningitis are naturally divided into three stages: A first prodromal stage of indefinite symptoms that lasts from four or five days to two or three weeks. . . .

From an article on "Backache," by C. M. Cooper, M.D., San Francisco.

Backache is a complaint exceedingly common, and the cause of its origin is often difficult to determine. Nevertheless, it receives scant attention in the text books of medicine, and the various encyclopedias. . . .

*Board of Medical Examiners.**—The following are the names of those appointed by the Governor on the State Board of Medical Examiners:

Walter Lindley, M.D., Los Angeles.
W. W. Roblee, M.D., Riverside.
J. Henry Barbat, M.D., San Francisco.
Charles L. Tisdale (H.), M.D., Alameda.
Charles Clark (E.), M.D., San Francisco.
W. M. Mason (E.), M.D., Lodi.
W. H. Stiles (H.), M.D., San Bernardino.
D. L. Tasker (O.), M.D., Los Angeles.
W. L. Vanderburg (O.), San Francisco.
G. F. Reinhardt, Berkeley.
F. R. Burnham, San Diego.

Note: O—Osteopath; H—Homeopath; E—Eclectic.

The Board met for organization early in May, but at the time of going to press we have not learned the result of the election of officers.

** Editor's Note.*—This excerpt shows the complexion of the Board of Medical Examiners in the days when California had a conjoint board. Dr. W. W. Roblee of Riverside was this year's (1934) chairman of the Committee on Local Arrangements for the annual session held at Riverside.



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BOARD OF MEDICAL EXAMINERS

(Continued from Text Page 480)

sory examination was made and the patient was said to have a minor ailment needing very little medical attention. The wife hoped this was true, but feared otherwise. Days passed and she became steadily worse. Finally, in desperation her husband called in the old family physician and to his horror learned that his wife was suffering from a serious ailment which would require an operation immediately. The health association was consulted, but steadfastly maintained that the ailment was not one which came under their policy. A hasty consultation with the family physician was held and the woman was removed to a hospital. An operation was performed, but by this time the disease had reached advanced stages and the woman died. As in the case of the business opportunity swindle, however, the written agreement did not include the ailment in question, and there was nothing the poor old man could do. A young chap visited the bureau offices only a day or so ago who was in terrible agony with appendicitis. Instead of having the necessary attention, he was complaining to the Better Business Bureau regarding his health association policy. It appears that when he joined the association he was informed that such ailments as appendicitis were taken care of by the association, but when he endeavored to obtain assistance for an appendectomy, he was told that this was not covered by his policy, but was offered a discount on his hospital bill."

As an evidence of the unbridled wholesale licensing threatened under the proposed naturopathic initiative, Special Agent Davidson reported, May 11, 1934, an interview with an individual in San Francisco, who said he held a naturopathic diploma issued by the National School of Naturopathy, Cedar Rapids, Iowa, and that he possessed a diploma signed J. E. Cum-

mins, which conferred on him the degree "Doctor of Naturopathy." This individual said he had never attended the school, in fact did not know where it was, but had secured the diploma through correspondence with a friend of his in New Orleans, paying approximately \$90.

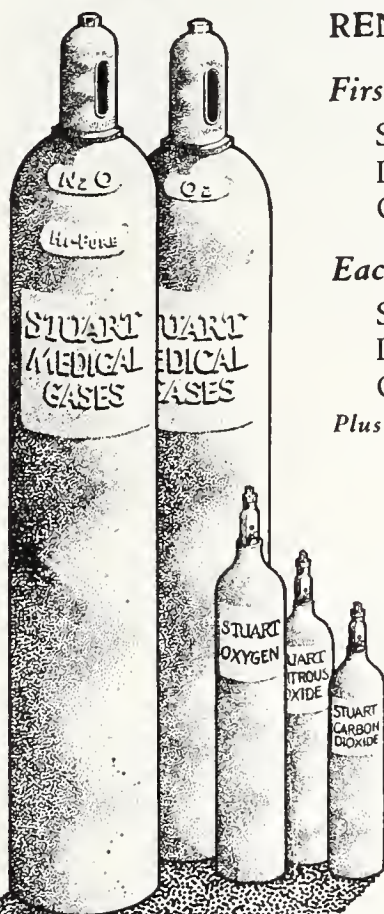
Pleading guilty to violation of the Medical Practice Act in the Justice's Court, Lancaster Township, Los Angeles County, Minard A. Hamilton was on May 10, 1934, sentenced to thirty days in the county jail, sentence being suspended on condition that he immediately cease treating the sick and afflicted. The investigation report indicates that in addition to stretching his clients on a crude board with straps attached to either end, Hamilton also assertedly "worked the old olive oil gall-stone racket."

Press dispatches relate that three test cases, brought by Percy Purviance, D. C., to determine the scope of practice permitted under the chiropractic license have recently been dismissed. One of these suits was brought in Richmond, the other two in Martinez. Commenting on one of these suits, Superior Judge Thomas D. Johnston of Martinez is quoted in the *Martinez Gazette* of April 16, 1934, as saying to Doctor Purviance: "When I informed you that the Attorney-General wanted to intervene, you dismissed the action and then instituted the declaratory relief action, in which you figured he couldn't intervene. . . ."

"Preliminary hearing on grand theft charges against Dr. E. J. Thurber, thirty-one, licensed chiropractor, and two asserted confederates was to continue before Justice Eugene Daney, Jr., this afternoon after the doctor was identified from the witness-stand as the

(Continued on Next Page)

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of a fake eye operation on Mrs. Anna Manker. The former charges had to be dropped due to an estimated value being set on the jewelry as amounting to less than the \$200 required in a grand theft case. The new complaint was filed by Mrs. Manker, charging Mohr with petty theft with previous conviction making it a felony. Mohr has been convicted on the same type of operation before..." (Anaheim Bulletin, April 18, 1934.) (Previous entries, December, 1931; May, 1934—Board's pamphlet, "Eyesight Swindlers.")

Recent reports indicate that a pair of eyesight swindlers on February 12, 1934, buncoed Mr. and Mrs. Joseph Aubel, Grants Pass, Oregon, out of \$412.50 by the time-worn alleged radium water eye-drop swindle. In addition, they paid \$500 as a rental charge on a cheap belt guaranteed by the swindlers to be a positive cure for diabetes if worn by the afflicted person. The swindlers promised at the end of twenty-one days to refund the money if the belt be returned to what proved to be a fictitious address.

"In one of the most sweeping and sensational exposés of illicit traffic in narcotic drugs ever staged in Los Angeles, federal,

BOARD OF MEDICAL EXAMINERS

(Continued from Preceding Page)

man who attempted to dispose of a stolen bond on April 5. Mrs. Minnie D. Cloud of 3935 Park Boulevard, testified she had lost a purse containing bonds and other valuables while transacting business in a local bank on April 2. E. H. Pratt, assistant manager of the University Avenue Branch of the First National Bank, testified Doctor Thurber had attempted to sell him one of the stolen bonds. Other defendants charged with the actual theft are John Hutler, forty-six, male nurse... and Mrs. Mary Connolly, county hospital employee." (San Diego Sun, April 17, 1934.)

"A new complaint was filed against Simon Mohr, 'eye doctor,' involved in grand theft charges previously when he was accused of taking jewelry in payment

state, and city authorities yesterday arrested five physicians (one a woman), four druggists, and a male nurse on charges of violation of the Harrison Narcotics Act. The arrests, according to Harry D. Smith, chief of the Federal Narcotics Division in the West, climaxed weeks of secret investigation that revealed a widespread traffic in habit-forming drugs... Those arrested yesterday, all held under bond of \$5,000 each were: Dr. F. M. Bantum, Dr. F. W. Starr, Dr. H. Gordon Bayless, Dr. Ethel Leonard, and Dr. F. T. Cary..." (Los Angeles Illustrated Daily News, April 25, 1934.)

"Dr. H. H. Mahdesian, fifty, Fresno physician, recently of Los Angeles, is under \$2,500 bond today, following his arrest late yesterday by Deputy United States Marshall Sidney J. Shannon on a charge of illegal sale of narcotics in Los Angeles a month ago. Federal officers said the arrest was made in connection

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with a widespread drive in Southern California against narcotics traffic by physicians. Mahdesian denies the sale alleged in the charge is illegal and said it was lawfully prescribed. He said he infrequently prescribed narcotics and in no sense has been engaged in narcotic traffic. The charge involves the alleged sale of five grains of morphin. . . ." (Fresno Bee and Republican, April 28, 1934.)

"City health officers and federal and state narcotic agents will confer next week on whether the city clinic for drug addicts shall be continued, Dr. George Parrish, health officer, stated today, following resignation of Dr. E. H. Williams, noted psychiatrist, as physician for the clinic. Doctor Williams was arrested several days ago by federal narcotic agents. 'The object of the conference is to determine what federal and state officers believe should be done with the sixty patients being treated at the clinic,' Doctor Parrish said. 'The institution has been effective in keeping these patients from being driven to crime by their desire for drugs.' Doctor Williams resigned after serving the clinic without pay. 'You couldn't pay me to continue in this position,' he told Doctor Parrish in resigning, the officer said. Doctor Parrish paid high tribute to Doctor Williams' work at the clinic." (Los Angeles Post-Record, April 28, 1934.)

"Another principal in Oakland's health insurance racket drew a jail sentence today when Superior Judge Fred V. Wood sentenced Edward Hakim to a year in the county jail for selling a fake policy" (San Francisco News, April 30, 1934). According to the San Francisco Call-Bulletin, April 18, 1934, Hakim, arrested

in Los Angeles, was returned to Oakland to face two grand jury indictments charging implication in insurance 'rackets.' Hakim, authorities say, was an associate of Harry Kramer, now in San Quentin for defrauding Alameda residents in a fake insurance company. "Deputy District Attorney J. Frank Coakley told the court that records seized in Kramer's San Francisco office indicated Hakim had received \$835 for selling seventy-eight policies, mostly in Los Angeles." This is another added to the list of successful prosecutions by District Attorney Earl Warren of Alameda County, whose activities in the prosecution of these health insurance racketeers has been outstanding.

"While Sam Blackstone, sixty-nine, alleged victim of a 'cancer cure' still lay in a precarious condition at the San Joaquin General Hospital, C. H. Leach (Leech), barber, charged with violation of the State Medical Practice Act, was yesterday remanded to jail. Leach (Leech) who admitted to officers treating Blackstone with medicine, the 'formula' of which had been in his family for generations, went to jail when Police Judge E. E. Breitenbucher set his bail for \$200 cash. Leach (Leech) had been at liberty on \$500 bail, but Assistant City Attorney Clarence Grant agreed that, owing to the 'aggravated nature of the case,' the bail should be higher. . . ." (Stockton Record, May 4, 1934.)

Investigation reports relate that on May 9, 1934, Oscar W. DeVaughn, M. D., was found guilty of murder in the second degree in the Superior Court

(Continued on Page 21)



If this tired, worried, over-worked mother were using Pablum for her babies' cereal feedings, she could have slept that extra much-needed hour instead of losing her temper while her children clamor for breakfast. For she can prepare Pablum in an instant, directly in the cereal bowl, simply by adding water or milk of any temperature—salt, cream and sugar for the older child and herself.

GETTING up an hour earlier in the morning is an inconvenience for most persons, but for the mother of young babies it is a hardship, sometimes almost tragic, frequently nullifying the best-planned pediatric advice.

This is especially true in the case of the nursing mother whose supply and quality of breast milk are affected by emotional shocks resulting often in agalactia and sometimes giving rise in the baby to diarrhea, colic, and even convulsions. Furthermore, the mother's emotional stress brings about a train of behavior on her part which is reflected in the child's psychologic reactions so that a vicious circle of bad habit formation is set up.

From this angle, the recent introduction of the pre-cooked form of Mead's Cereal, known as Pablum, assumes new importance in the doctor's

psychological handling of both mother and child, quite aside from its nutritional value.*

Because Pablum can be prepared in a minute, the mother can sleep the extra hour she would otherwise be compelled to spend in a hot kitchen cooking cereal. Added rest means better poise, so that petty annoyances do not bring jaded nerves. Prompt feedings prevent many childhood tantrums, and a satisfied baby usually eats better and enjoys better digestion and growth.

*Like Mead's Cereal, Pablum represents a great advance among cereals in that it is richer in a wider variety of minerals (chiefly calcium, phosphorus, iron, and copper), contains vitamins A, B, E, and G, is base-forming and is non-irritating. Added to these special features, it is adequate in protein, fat, carbohydrates, and calories. Pablum consists of wheatmeal, oatmeal, cornmeal, wheat embryo, yeast, alfalfa leaf, and beef bone.

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BOARD OF MEDICAL EXAMINERS

(Continued from Page 19)

of Alameda County after a jury trial lasting several days, the charge growing out of the death of Mrs. Louise Swartz, thirty-one years of age, who was reported to have died early this year, following an abortion alleged to have been performed in Doctor DeVaughn's office on or about February 1, 1934, her death occurring ten days later. (Previous entries, April, September, and December, 1930; November, 1933; May, 1934.)

Another new type of drugless healing was discovered when Clyde F. McNeil was reported charged in Los Angeles with violation of Section 17 of the Medical Practice Act. McNeil is said to hold a diploma reading as follows:

"Aquarian-Age Healing. Founders. Developers. Hurley and Sanders.

"This diploma certifies that Clyde F. McNeil has completed the standard course in Aquarian-Age Healing on June 24, 1933.

"It was part of the understanding under which this course was taught that no student could be recommended by the undersigned to the public as sufficiently skillful to merit their confidence with a lower grade, mathematically arrived at, than 85 per cent. This student attained a grade of 97.3 per cent (ninety-seven and three-tenths per cent).

"In witness whereof we have hereunto set our hands and seal this 22nd day of January, 1934.

(Seal)

(Signed) John Hurley, D. C.

(Signed) Helen G. Sanders, D. C., Ph. C."

Aquarian-Age healing is defined as follows: "... as a science, art and philosophy for the removal of strain and the correction of distortion in the human body." Under the theory of this Aquarian-Age healing, the

body, when sick, is out of line. The first thing they do is line up the patient with a plumb line to see just where he is out of balance, and then treatments are given, consisting of a sort of combination of magnetic massage and real massage. The students are told that they need no license for this type of treatment. History reports of patients found at the time of investigation showed some amusing sidelights. One patient was said to be suffering from pulmonary hemorrhage due to an attack of asthma before she was born. Another patient had "ciatic rheumatism" and "vericose veins." Another had "paralysis adjutant." A great many patients had been diagnosed as "very ticklish." As a part of the treatment, it is asserted that the patients would join in singing a college song to the tune of "Coming Thru the Rye," the words reading:

"BIO-ENGINEERING

"I am a bio-engineer,
And have a technique, new and queer;
'Tis something few yet understand;
But with it, I've the upper hand
Of all distortions, large or small,
And one light touch will conquer all.
And now no pain you need to fear,—
Just see a Bio-Engineer.

First Chorus

"We're Bio-engineering
Your sore spots quickly clearing;
Your rigid backs, we can relax,
With Bio-engineering."

"Aroused by results that have followed several facial 'peeling' operations, the State Board of Medical Examiners has launched a campaign against such practices, according to William A. Byrne, special agent of the board. Byrne said he arrested Mme. Nell Ander-

(Continued on Next Page)

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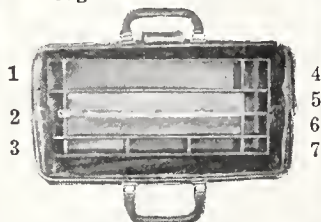
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- 4, 5, 6—For Miscellaneous Items.
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(Continued from Preceding Page)

son of 315 South Broadway, following numerous complaints that she had used a carbolic acid solution in her face 'peeling.' . . . Four persons declared to have given facial 'peels' have been convicted, Byrne said, and three others are on probation for aiding and abetting in the practice." (Los Angeles *Post-Record*, April 23, 1934.)

"A man and two women being held in Petaluma are believed to be the same persons who assertedly robbed T. S. Grider, Porterville rancher, of \$40 in currency during an 'examination' for rheumatism. During the course of the 'examination' one of the women tapped Grider on the chest, and after they left he discovered \$40 he had in his shirt pocket was gone. The trio professed to be healers, and word received from Petaluma stated that the trio picked up there had been operating a similar 'racket.'" (Visalia *Times-Delta*, April 16, 1934.)

Reports relate that John Hugh Lally, featured in *The Journal of the American Medical Association*, February 21, 1931, and October 31, 1931, under the caption "Minnesota Medical News," also in Chicago papers of February, 1932, as assertedly in trouble with the Department of Registration and Education, State of Illinois, was on May 2, 1934, adjudged guilty in the Justice's Court, Santa Barbara, of violation of the Medical Practice Act and sentenced to serve 180 days in the county jail, sentence being suspended. The committing judge is said to have informed Lally that if he be found violating the Medical Practice Act in any part of California within the next two years, the judge would be glad to revoke the suspension of jail sentence.

(Continued on Page 24)

APPROVED CLINICAL PATHOLOGISTS

American Medical Association Essentials for An Approved Clinical Pathologist

An approved clinical pathologist should be a licensed graduate of medicine. He shall have specialized in clinical pathology, bacteriology, pathology, chemistry, and other allied subjects for at least three years, and he should be reasonably familiar with the manifestations of disease in the body. The director of a clinical laboratory shall be on full time or have definite hours of attendance, devoting the major part of his time to this specialty. A clinical laboratory is an institution organized for the practical application of the fundamental sciences by the use of specialized apparatus, equipment and methods, for the purpose of ascertaining the presence, nature, source, and progress of disease in the human body.

The following Clinical Pathologists directing private laboratories in California are approved by the Council on Medical Education and Hospitals of the American Medical Association:

**Clinical Laboratory of Drs. W. V. Brem, A. H. Zeiler, Roy W. Hammack
and G. D. Maner, 657 So. Westlake Avenue, Los Angeles, California.**

Zera E. Bolin, M.D., 490 Post Street, San Francisco, California. / / /

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BOARD OF MEDICAL EXAMINERS

(Continued from Page 22)

Reports relate that on March 20, 1934, Sara Garcia was found guilty of violation of the Medical Practice Act in the Los Angeles Municipal Court after a jury trial, and on March 27, 1934, was sentenced to pay a fine of \$300 and serve 180 days in the county jail.

"Just so long as an arch supporter manufacturer does not employ 'forcible' means for relieving the aches and pains of corns, bunions or flat-feet, he will not be violating the Medical Practice Act by encroaching upon the private preserve of chiropodists, Attorney-General U. S. Webb ruled Friday. The Act does not prohibit shoe salesman from 'fitting' the

appliances at the time of sale, he informed Dr. C. B. Pinkham, secretary of the State Board of Medical Examiners." (San Francisco News, May 5, 1934.)

Reports indicate that E. M. Hahn on April 20, 1934, pleaded guilty in the Municipal Court of Long Beach to a charge of violation of the Medical Practice Act, and was sentenced to pay a fine of \$100, \$90 of which was suspended.

George Timothy O'Sullivan, featured in the 1930 annual report of the Board of Medical Examiners in connection with an assertedly spurious diploma bearing the name of the College of Physicians and Surgeons, San Francisco, on May 2, 1934, pleaded guilty

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in the Municipal Court of San Francisco to a charge
of violation of the Medical Practice Act, according to
the report of Special Agent Davidson, and was sen-
tenced to ninety days in the county jail, sentence being
suspended on condition that he no further violate the
Medical Practice Act and that he refund the amount
of money he had received for treatments given Mrs.
Mary Roberts.

Reports indicate that following a charge of violation
of the Medical Practice Act, C. W. R. von Radesky
on April 23, 1934, in the Municipal Court of Long
Beach, was sentenced to pay a fine of \$250 or serve
125 days in the city jail, said sentence being suspended
and defendant placed on probation for two years.

J. N. Wallace, said to operate a pharmacy in the
Mexican section of Brawley, charged in the Justice's
Court, Brawley, May 8, 1934, with violation of the
Medical Practice Act, pleaded guilty and was sen-
tenced to pay a fine of \$100, said sentence being sus-
pended on condition that he no further violate the
Medical Practice Act.

Thoughts on Life and Its Constant Illusions

"This human life is only a perpetual illusion; people
do nothing but deceive and flatter one another. No
one speaks of us in our presence as he speaks of us in
our absence. The union that exists among men is
based only on this mutual imposition; and few friend-
ships would survive if each one knew what his friend
says of him behind his back, although he then speaks
sincerely and without passion."—Blaise Pascal, Chap-
ter VIII: Pensées sur la Religion.



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National Research Council Survey on Gonococcus and Gonococcal Infections.—A Committee for Survey of Research on the Gonococcus and Gonococcal infections has been formed by the Division of Medical Sciences of the National Research Council, in coöperation with the American Social Hygiene Association. Its purpose is to collect, analyze, and collate the facts already established and the efforts now in progress to add to knowledge of the gonococcus and gonococcal infections, especially as regards bacteriology, pathology, immunity, mechanism of infection, and some of the forms of therapy. Attention will be concentrated chiefly on work done in the United States. At the close of the preliminary survey the committee, with the assistance of a conference of experts, will compile a report with the object of stimulating interest in the study of the gonococcus, of providing a point of departure and of suggesting promising leads for further investigation. The survey will cover the literature, but it is hoped that unpublished work, and studies which were incomplete or whose results were inconclusive, may also be included.

Dr. Stanhope Bayne-Jones, chairman, earnestly invites the coöperation of workers interested in this field. Other members of the committee are Dr. Edward L. Keyes, Dr. Walter Clarke, secretary, and Dr. Francis Blake, chairman of the division, ex officio. Headquarters have been established at Room 1101, 450 Seventh Avenue, New York, where communications and reprints will be welcomed.

Human Rehabilitation.—Large-scale plans for human rehabilitation "far beyond anything that has been done in the past" should follow up the country's program of industrial recovery, declared Lewis H. Carris of New York City, managing director of the National

Society for the Prevention of Blindness, in an address before the National Conference on Rehabilitation of Disabled Persons here today.

"The new deal in government," said Mr. Carris, "is giving us also a new deal in man's attitude to man, in the employer's outlook on his responsibility to the employee and to the community, in the whole country's attitude toward conservation of human resources as well as material resources. There is need now, and the time is ripe, for the forces of rehabilitation to prepare for the biggest job in their history, to coöperate with and to seek the coöperation of the many other professional groups which can help to prevent much of what is otherwise impending disaster for thousands of men and women.

"Now is the time to reconsider what constitutes a handicap for work. Now is the time to seek through governmental sources the same public interest in and perhaps comparable financial support for human rehabilitation that we are observing in the rehabilitation of manufacturing and distributing machinery and practices, in employer-employee relationships, and in the conservation of natural resources.

"A country which is willing to spend billions for relief of the hungry, which for the first time in four years of depression recognizes this as an obligation of the nation and which has the ingenuity and the courage at this late date in the depression to find and spend such large sums for relief—such a nation will also find the will and the resources to do a rehabilitation job far beyond anything that has been done in the past.

"Much has been said of the extent of unemployment, of the destitution of those who have remained without employment for two or three or four years, and of the need for material relief. Not so much has

(Continued on Page 28)



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(Continued from Page 26)

been said or written of those results of the depression which are daily adding to the need for rehabilitating men and women—a job which will have to be done in the years immediately ahead.

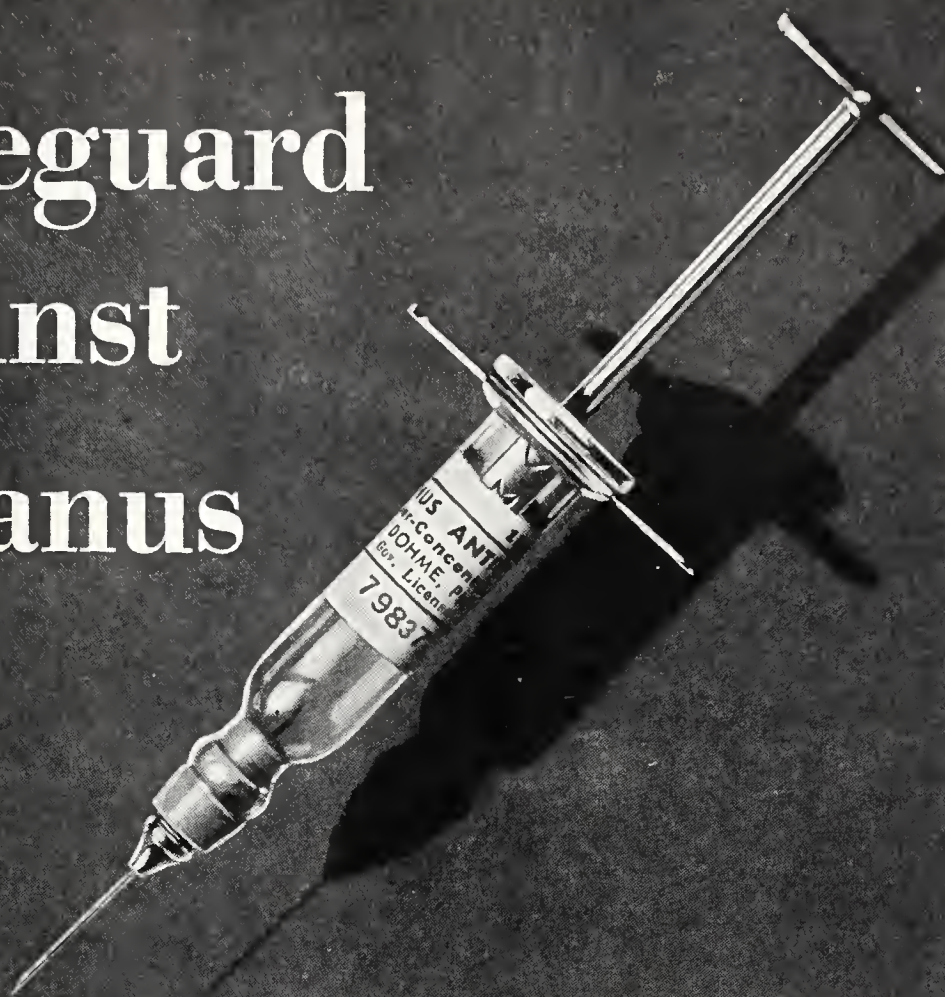
"First among these results are malnutrition and all its consequences. Long continued unemployment has affected more than 10,000,000 families, numbering probably 40,000,000 individuals, in this country in the last three years. When one reads the reports of welfare workers in immediate touch with these families or, better still, talks to these workers and hears the observations that do not often get into the records, one cannot escape the conviction that a large proportion of these 40,000,000—those who are on relief rolls as well as those who are not—have been hungry and underfed, for weeks, months, and years.

"In the years immediately ahead, these underfed men and women and their grown children will return to our factories, mines, railroads, elevators, motor-trucks, streetcars, and other work places. It will be years—and possibly several generations—before the purely physical effects of their long-continued privations have been wiped out; for many this will never happen. Meanwhile, marked increases in public and industrial accidents, marked increases in illness of all sorts are inevitable. These undernourished workers will, for years, become more easily fatigued; they will, in many cases, be less alert to the health and accident hazards of their occupations; their coördination of sense organs—sight, sound, smell and touch—with brain impulses will be less rapid. Only a miracle will save us from a marked increase in the frequency and severity of serious industrial injuries and diseases during the next five or ten years.

"We must seek not only to reduce unemployment by redistribution of work opportunities; not only to raise the standard of living by reducing hours and increasing pay rates, but also to conserve to a greater

(Continued on Page 30)

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(Continued from Page 28)

degree than has been true in the past, the life, limb, and general health of the American worker. Our great difficulty has been that production has been organized not to meet the needs of the individuals composing society, but to yield the greatest possible profit, in order that this profit might be reinvested in additional machinery and raw material which in turn could produce more profit. This philosophy of life has resulted in a steadily increasing multitude of individuals needing rehabilitation for the loss of sight or limb or for disability caused by disease; it has produced a much greater multitude who need rehabilitation in the sense of finding a job and adjustment to life."

Survey of Winery Wastes.—The Bureau of Sanitary Engineering of the California Department of Public Health has completed a survey of waste disposal prac-

tices in sixty-six wineries of the state. This survey has been in progress during the past three months. The impetus given to the industry since the repeal of the Eighteenth Amendment has developed acute problems in the disposal of winery wastes. In those wineries which produce only dry wines of low alcoholic content the problems of waste disposal are less acute than in those wineries which make fortified, or sweet wines. In the case of wineries producing dry wines of low alcoholic content, the wastes are: pomace, a garbage-like sour waste made up of stems, skins, and seeds; lees, the organic and tartaric sediment of fermentation amounting to 2 or 3 per cent of the wine; and the dilute wash-up water. Lees are strongly organic, but are fairly easily handled on drying ground. Altogether, wineries making dry wine have little trouble with waste disposal on land. Fortified or sweet wine wineries, however, must carry on a distil-

(Continued on Page 34)

CALIFORNIA AND WESTERN MEDICINE

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ACCREDITED REPRESENTATIVE OF THE CALIFORNIA AND NEVADA MEDICAL ASSOCIATIONS

VOL. XL

JUNE, 1934

No. 6

SOME PRESENT-DAY MEDICAL ORGANIZATION PROBLEMS*

ADDRESS OF THE RETIRING PRESIDENT OF THE
CALIFORNIA MEDICAL ASSOCIATION

By GEORGE G. REINLE, M. D.
Oakland

WHEN, in the year 1513, the Spanish explorer, Balboa, splashed into the waters of a great unknown western ocean and contemplated its far horizon, his feelings must have been akin to mine as I look forward to the distant horizon of the troubled sea of modern medicine. What lies beyond?

Recalling that the intrepid Balboa was later beheaded despite, or perhaps because, of his discovery of the Pacific in the name of Spain, I shall here undertake to do little more than contemplate the horizon. The Pacific was in time explored and its farther shores discovered. The most distant shores of medicine will eventually become known.

I choose to concern myself with the strand upon which I stand, and to that visible stretch of sea which lies immediately before me.

And so in coming before you today, at the close of a twelve months' stewardship, I shall confine myself to those subjects of which I have some personal knowledge; and, in particular, to the rumbling surf of medical economics which, by reason of its ceaseless rumble, if for no other, commands attention.

But before I take up the problems of medicine in its broader aspects, it is both my duty and pleasure to report on the activities of the California Medical Association for the last year.

MEDICAL LEGISLATION

One of our most active committees is the Committee on Legislation and Public Policy. It was the duty of this committee to carefully scan each of the 3,900 bills introduced during the last legislative session. The committee found that almost 10 per cent of these bills, or approximately 400, had some bearing, directly or indirectly, on questions of public health. Careful analysis of each

bill was necessary in order that we might be apprised of its full import.

Dr. Junius B. Harris, chairman of this committee, performed an almost superhuman task in watching the details of all of this legislation through a long and trying session of the legislature. It was necessary for him to almost abandon his practice for more than one hundred days, and to be constantly on watch at the Capitol at all hours of the day and night.

That the people of California are not suffering from some of the pernicious legislation proposed on public-health questions is, therefore, largely due to the efforts of Doctor Harris. Mr. Ben H. Read assisted Doctor Harris.

May I urge each member of our Association to support the work of its Legislative Committee, and the personal efforts of Doctor Harris, by exercising your duty as voters and taxpayers to inform yourself about legislation and to give of your knowledge to your legislators, who must pass upon these public-health questions.

Every component county society which has not already done so should appoint a committee to contact state representatives and senators in their district before the opening of the next legislature.

LEGAL DEPARTMENT

The past year has thrown a heavy responsibility on our legal department. Every possible assistance was extended by our general counsel, Mr. Hartley F. Peart, in the litigation pertaining to the unauthorized use of county hospitals. As you all know, the trial of the case involving the County Hospital of Kern County resulted in a sweeping victory for the position contended for by the physicians.

In connection with this subject, our general counsel has had numerous conferences with our members in other counties where the same problem is presented, and has rendered aid and assistance in opposing the granting of federal loans for the unwarranted and unnecessary increase of such hospitals. He has assisted actively in the formation of the medical service plan now in operation in Alameda County, and worked with the Fresno County Society, the committee of the San Francisco County Society, and with other societies interested in developing a similar plan.

*President's address, sixty-third annual session of the California Medical Association, Riverside, April 30 to May 3, 1934.

All this, together with legislative and other matters, has given our legal department perhaps the busiest year in the history of the Association.

CANCER COMMISSION

With the publication by the Cancer Commission of two or more reports of special committee studies, the surveys of methods of diagnosis and treatment of the various types of malignant disease will have been completed.

We believe that these studies have been of great value. They represent the results of the first attempt on a large scale to set down in definite form the combined experience and opinion of the profession, rather than the experience and opinion of individuals. They have, we believe, very definitely pointed out certain specific needs of clarification, as well as defined methods and procedures which should, perhaps, be regarded as standard at the present time.

It seems to us desirable that these studies be collected and reprinted in ready-reference form, and thus be made available to the members of the Association. The type has been preserved by the printer of the articles as they have appeared in the JOURNAL, and, therefore, the cost of reprinting should not be very great. It is my earnest recommendation that this be done.

In addition, the Cancer Commission has continued its contacts with the profession through county medical societies, a number of which have been visited by representatives of the Commission or have listened to cancer programs prepared under the auspices of the Commission.

PUBLIC RELATIONS

The Committee on Public Relations has spread its activities over a wide field. It has been active in studying various forms of medical and hospital service plans. Many plans which were proposed by component county societies have been carefully analyzed. In coöperation with our general counsel and committees from the Alameda County Medical Association and accredited hospitals, a hospital service plan has been formulated in Alameda County. This represents over a year's study and investigation.

The committee has completed the outline for the establishment of a speaker's bureau, and each component county society has been requested to appoint an educational committee or delegate the activity to one of its standing committees.

A membership campaign was initiated by the committee in order to increase the membership of the California Medical Association. A list of all the licentiates in each county not belonging to the component county society was compiled. These lists were sent to the secretaries with the request that they designate whether, in their opinion, the licentiate would be eligible for membership.

The survey revealed that 68 per cent of licentiates were members, 13 per cent were eligible, the whereabouts of 6 per cent were unknown, 6 per cent had retired, 3 per cent had moved away, and 4 per cent were rejected for membership.

The Department of Public Relations has made a survey of medical books on the shelves of the

public libraries in communities of the state with a population of 10,000 or more. A survey of the 207 libraries in the smaller communities will be completed as rapidly as possible.

For the second successive year, the California Medical Association installed exhibits at the State Fair in Sacramento last fall. The object of these exhibits was to acquaint the public with what the Association is doing for medical science. It is estimated that about 700,000 persons attended these two fairs.

PUBLICITY

The Association, through its Department of Public Relations, last year inaugurated an educational program for the press. After careful consideration of the various medical articles published in the press, it was decided to begin a series of short articles devoted to medical subjects and designed for the lay reader. These articles avoid advice-giving, but describe what modern medicine is doing in the treatment and prevention of various diseases. Prepared by an experienced newspaper writer under the direction of the department, they are now being distributed to approximately fifty newspapers throughout California. No paper was placed on the mailing list that did not, in response to a query, request the articles.

In addition to this educational publicity feature, we have had the advantage, from time to time, of news articles dealing with current affairs which concerned the State Association. Publicity for the 1933 session at Del Monte, as well as that for the present session, was handled by the representative who prepared the articles for the series. I earnestly recommend that this department be continued.

WOMAN'S AUXILIARY

Mrs. A. M. Henderson, president of the Woman's Auxiliary to the California Medical Association, reports a busy year. The state board meeting was held in Los Angeles on February 15, when plans for the present session and revisions of the Constitution and By-Laws were discussed. I am sure that we may look forward to another successful year for the auxiliary; certainly they have our best wishes and full support.

EXECUTIVE COMMITTEE

The Council and the Executive Committee of the California Medical Association each have held three meetings during the last twelve months. Much Association business of a wide variety has been handled by the Council during that period. Prior to the inauguration of the Public Relations Department, the Executive Committee met once a month, but since then has held called meetings at irregular intervals.

Due to the fact that so many important problems arise during the interim of meeting requiring solution and action, which necessarily rests upon the chairman of the Council, I urgently recommend that the Executive Committee return to the former plan of one meeting every month, since the affairs of the Association are of such moment that they cannot otherwise be adequately handled.

COUNTY INSTITUTIONS COMMISSIONS

It would appear that County Institutions commissions offer the solution to the problem of the supervision of county hospitals and clinics, and it is my recommendation that component county societies take steps to coöperate with their county supervisors in the establishment of such commissions where none now exist.

In Alameda County, an outstanding example, the County Institutions Commission has taken the county hospitals and clinics out of politics. It stands as a barrier between all factions preventing political control and abuse of hospital privileges. It guarantees to the medical profession the operation of county institutions on a rigid program, which closes the doors to all but eligible patients.

HEALTH INSURANCE RACKETS

It was not until District Attorney Earl Warren launched a campaign directed against fraudulent health insurance concerns that the extent to which this "racket" has developed in California became known. Under his direction, nineteen indictments were returned; one man was sent to San Quentin prison, and three to jail. The District Attorney of San Francisco has also begun action to rid the community of these modern Wallingfords. It would be well if every district attorney in the state would follow suit, since we have Mr. Warren's word for it that the "racket" has by no means been checked.

MEDICAL ECONOMICS

During the last twelve months there has been an increasing amount of discussion of the problems of medical economics. In the press, in the magazines (both lay and medical), and on the platform, medical and hospital problems have been dealt with by persons of every degree of qualification. The literature has been both instructive and destructive—the writers both informed and misinformed.

At times, I have almost been compelled to believe that some of these writers and speakers hold that the economic salvation of the United States lies in thrusting upon the country a program of compulsory health insurance.

Paid lay proselyters have spread this gospel from coast to coast. Representatives of this and that fund—lay organizations for the most part—have preached to the medical profession and the public that the only road to medical salvation lies in the church of government-controlled medicine.

They even have gone so far as to divide physicians into two groups: reactionary and progressive. They claim, of course, that the "progressives" are devotees of their own holy belief.

We have been, and are going through a period of economic stress. Medicine, along with every other line of human endeavor, has felt its strangling embrace. In a land of plenty, poverty has brought suffering to millions. Worthy American citizens have been unable to buy food and clothing for their families; and manufacturers and farmers have been unable to sell the products of factory and farm. Worthy American citizens also

have gone without medical service and hospital care because they were unable to pay for it, while physicians twiddled their fingers in empty offices and worried hospital executives contemplated rows of empty beds.

I have yet to hear of any plan for the socialization of the food industry, by which the Government will take over farm and factory and run both for the benefit of the people. I have yet to be told of any plan for Government operation of the clothing industry for the benefit of the people. I can almost hear the cries of horror which any such suggestion would evoke.

But I have heard, and we are hearing today, much about the socialization of medicine; of plans for state and federal controlled, compulsory insurance, by which the physicians of the country would be organized into a sort of communistic unit at the beck and call of politically controlled bureaus.

The argument is advanced that the people are entitled to medical service and hospital care, regardless of their ability to pay, because good health is the very foundation of the nation. With this argument I have no quarrel. Nor do I disagree with the assertion that many who needed it have gone without adequate medical service and hospital care. These are indisputable facts.

Of course, the unemployed father of a starving family requires, first of all, food and clothing; and failing these, he will require medical service and perhaps hospital care. The medical profession cannot undertake to provide food and clothing, but in a nation whose physicians annually give \$600,000,000 worth of free service, and who are sworn to the enduring principles of the Oath of Hippocrates, it is inconceivable that the medical profession will ever fail to fulfill the obligation which now confronts it in the matter of adequate medical service for every economic class.

We resent, however, having plans for such service thrust upon us by proselyting laymen. We resent the implication that medicine is lagging in its obligation: the greatest strides in medicine have come within the last fifty years. Most of us, especially the older heads, have watched some of these developments and, indeed, many among you have been instrumental in their development. Does it not, therefore, hold that medicine is alert, progressive, and able to hold its own in this changing world?

Are we to accept without argument the differentiation between the progressive and the reactionary physician? By "progressive," I assume that the exponents of compulsory insurance mean the physician who hails some hastily conceived and, as yet, untried plan as the great cure-all; or one who blithely plunges into some minor group undertaking, regardless of its possibilities of success, on a broad, or even a small scale.

If this be "progressivism," then I confess to being a reactionary. I am forced to go further and state that in our ranks the progressives of this type are comparatively few. And to that, I add a fervent, "thank heaven!"

I cannot, however, let this differentiation go unchallenged. Here in California we are doing a

vast amount of work to the end that adequate medical service and hospital care shall be made available to that great mass of people in the lower economic brackets. Must we jettison all that has been accomplished and take on board a cargo of untried ideas, in the fear of being called "reactionaries" if we decline?

Permit me to point out that any plan adopted is not to be a temporary plan, such as the CWA, to be cast aside in a few months when the emergency shall have ceased to exist; or because the political winds have ceased to blow from east to west and are now blowing from north to south; or because they have ceased to blow at all. We must build enduringly, for the people of tomorrow as well as for the people of today. And for that reason we must reject the offers of help, however kindly meant, of inexperienced theorists—lay economists—who might better be devoting their talents to the creation of payrolls; and politicians who shrewdly see in the phrase "High Cost of Medical Care" a vote-pulling campaign slogan. In the building of our house we believe that only physician-workmen should be employed!

We are assured that if we accept government-controlled medicine the right of the patient to select his physician will continue as it always has. This smacks very much of a preëlection promise: "If the Democrats get in, taxes will go down"—so, too, if the Republicans win. Yet taxes always go up. It just does not stand to reason.

More than ever before the personal relationship between physician and patient should obtain. Not so many years ago we heard it lightly said that "90 per cent of the people who go to physicians have nothing wrong with them." This, we are beginning to realize, was little more than an admission of ignorance. Today we know that a man may be really sick whose ailment perhaps cannot be definitely classified, and I venture to say there is not a physician among you who has not one or more such patients on his list.

What chance would these unfortunate individuals have under a system which reduces the science of medicine to an industrial plane, with numbers for the patients and perhaps for the physicians; in which quantity and not quality must of necessity be the main factor; in which preventive medicine would be stifled by the very nature of this mechanical system and buried under an avalanche of paper work?

White has always been the uniform of the physician. Would they regimentize us in blue denim uniforms with badges for identification? Do not be deceived. It has been done in the past. Complete socialization of medicine is no new experiment.

In 1818 the German Duchy of Nassau established a complete system of socialized medicine. Twenty-eight medical districts were set up, each in charge of one head physician. The physicians were obliged to wear uniforms and were salaried. Needless to say that this system eventually broke down, just as any comparable plan in this country would give way.

One after another compulsory health insurance plans have been tried in the European countries. Germany has had it in some form for forty-eight years. England has it. And yet *medical* investigators have demonstrated that Europe has a poorer quality of medical service than is furnished the indigent sick in America.

Certain medical investigators found that in Germany the number of pus appendix cases necessitating drainage is much greater than in the United States, and that the number of unnecessary visits in England has reached such proportions that many of the panel physicians disconnect their telephones between the hours of 10 p. m. and 7 a. m.

I will grant that there must be some good in every one of the European compulsory systems, else they could not exist at all. I will also grant that the language spoken in each of these countries well serves its purpose. I will not grant that you could superimpose the Italian, the Russian, or the German language on the American people. To say that the European compulsory health insurance systems would work in this country is like saying that we should adopt the Russian language because it works so well in Russia.

I will admit, on the other hand, that because America has the best medical service in the world, this does not argue that we have no problem to solve. We have a problem—a grave problem. We have never declined to acknowledge the problem nor to cope with it. The issue has been clouded by individuals and groups who seem intent on broadcasting the thought that the medical profession is doing nothing about it.

What, then, are we doing about it? Unfortunately we have not been able to travel the length and breadth of the land proclaiming the progress of our work. But we have been making progress, nevertheless.

In the Bay district we have created the nucleus for a state-wide plan. This is known as the Alameda County Plan. I will not take your time to describe the details of it, for I told you about it a year ago today and the medical journals have recounted its progress from time to time. I will simply report that it has been working for eighteen months.

Similar plans are in operation in San Diego County and Sacramento County. Fresno County is preparing to launch one. Gradually the ripples are widening.

We have prepared, as a component part of the Alameda County Plan, the Mutual Hospitals Association. This is a non-profit corporation controlled by the medical profession with the coöperation of the accredited hospitals. Provision has been made for the issuance of beneficiary certificates at nominal cost. Its launching awaits only the completion of certain formalities.

This plan has not been hastily conceived: it indeed represents the most careful investigation. It has been weighed and reweighed; analyzed and re-analyzed from every standpoint. It is the product of the work of the medical and hospital people

under the direction of, and with the fullest coöperation of the Council of the California Medical Association. It has been designed not for a day nor a year, but for permanency.

I urge that politicians and lay organizations keep their hands off and permit us to extend this plan throughout California. Call us "reactionary" if you will, but let us go ahead with this plan without interference, and we will show you one of the greatest examples of progress in medicine of this or any other period.

A recent speaker said that "the eyes of the nation are on California." Permit me to answer that California is too busy to care. We have been reproved from the platform and in the press for our failure to act swiftly. Gentlemen, we do not intend to be stampeded into some hastily conceived plan because we know, and any reasonable and fully informed person will agree with us, that any such plan would meet with an equally swift death.

We are not dealing with merchandise, but with human beings. The health and happiness and, yes, the very lives of our people are at stake. We are prescribing, to the very best of our collective ability, for our people. It is our job. We do not fancy having laymen prescribe for us or for our patients.

The lay proponents of compulsory insurance reply that their intention is not to interfere with the science of medicine, but that they have the right to speak for the people in regard to the *application* of medicine. But are they speaking for the people? Since when has the voice of the people been heard to say: "Take medicine away from the medical profession and give it to the politicians?"

And that, my friends, is exactly what will take place if medical service and hospitalization go under government control, whether state or federal. It would become another political football. We have only just witnessed a fine example of congressional athletes kicking one political football about the halls of Congress. Let us, by all means, avoid the pitfall which has engulfed State Industrial Accident Insurance. Despite the promises that every employee would be given free choice of physician, we now find the medical service being administered by a small panel of physicians, selected by the insurance companies. We find these same company physicians exacting fees from other physicians throughout the state.

My friends, I do not set myself up as an oracle of medical economics. I have only endeavored, in my humble way, to express not alone my own ideas, but the best thought of the medical profession as I understand it.

I, therefore, earnestly recommend to the California Medical Association the adoption of a voluntary plan for medical service to serve the people of California.

To have served you during this last year has been both an honor and a pleasure. I shall look back upon those busy twelve months as a bright spot in my career.

Farewell, as your president, and God bless you, one and all!

532 Fifteenth Street.

FOCAL INFECTION—SOME MODERN ASPECTS*

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A FOCUS of infection is a localized area of tissue which has been infected by pathogenic bacteria. The primary focus is the tissue first infected, from which bacteria gain entrance into the blood or lymph stream and thereby cause either systemic disease, or secondary foci of infection, in the various organs and tissues of the body.

INCIDENCE

Focal infection is one of the most universal of human ailments. Very few people get through many years of life without experiencing some form of it. The focus may occur almost anywhere in the body, but certainly the most usual foci are found in the mouth, pharynx, accessory sinuses or middle ear. Rosenow¹ believes that a focus of infection is more menacing when the infectious material is under pressure; that is, where facilities for drainage are poor. Such a focus would be an apical root abscess, or a small abscess in the interior of the tonsil.

ETIOLOGY

Many factors predispose to focal infection. Among such may be mentioned long-protracted illness, old age, exposure, addiction to excess alcohol or drugs, and poor personal hygiene. The devitalization of teeth and gingivitis predispose to dental infections. It appears almost certain that a deficiency in the vitamins predisposes to focal infection. For example, David Smith² has shown that guinea-pigs deprived of vitamin C develop pyorrhea and ulcers of the stomach. I have always suspected that the prevalence of infected tonsils was largely the result of modern city life. The tonsil was planned by nature as a scavenger to relieve prehistoric man of bacteria, dust and other foreign bodies that accumulated in the mouth. Modern man, however, lives mostly in large cities, where he is subjected daily to the inhalation of an excess of dust and bacteria, and as a result the tonsil, overloaded with infectious material, breaks down under the strain. Chronic sinus infection and chronic middle-ear infection are induced by repeated acute respiratory infections.

EXCITING CAUSES

The focus of infection may be caused by almost any of the ordinary pathogenic bacteria, but bacteriologists have come to associate some form of streptococcus with a majority of focal infections, and rightly so, since the streptococcus is not only the most frequent exciting agent in these conditions, but, furthermore, appears to be the organism most likely to set up secondary infection in some distant organ or tissue of the body. For example, according to Haden,³ apical abscesses of the teeth are caused, in 92.5 per cent of cases, by

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some form of streptococcus. This has also been my own experience. It is claimed by Bunting⁴ that dental caries is caused by the *Bacillus acidophilus*, but dental caries is not primarily a significant form of focal infection. Pyorrhea is usually associated with a mixed bacterial flora, but streptococci are always present in large numbers.

Acute and chronic tonsillitis are streptococcal infections in almost 100 per cent of cases. G. I. Steffen and the writer⁵ once produced experimental tonsillitis in a human volunteer by swabbing his tonsils with a pure culture of *Streptococcus hemolyticus*. Curettings from the interior of the tonsils usually give a pure culture of *Streptococcus hemolyticus* or *viridans*, or possibly one of the intermediary forms of streptococcus.

Acute sinus infections are usually due to some form of streptococcus or pneumococcus, or possibly a Pfeiffer bacillus. In long-standing chronic sinus infections, a streptococcus, or pneumococcus, may be recovered, either alone or in association with a *Staphylococcus albus* or *aureus*. This is true, also, of chronic discharges from the middle ear. Chronic infections of the gall-bladder usually show either colon bacilli or some form of streptococcus. The same is true of infections in the pelvis of the kidney. Prostatic infections in the male, or cervical infections in the female, yield gonococci, streptococci or some form of colon bacillus.

PATHOGENESIS

The metastases of focal infection occur through the blood stream, or through the lymph channels. The vascular route is the commonest method, and is well typified in gonococcal arthritis, where the primary focus is in the urethral tract, and the gonococci, escaping into the blood stream, localize in the joints and set up metastatic infections there.

But infections may also spread through the lymph channels. We are all familiar with those patients who develop a septic sore throat or tonsillitis, which is followed by enlargement of the cervical lymph nodes, and perhaps suppuration in one or more of them.

The rôle of allergy in focal infection is well illustrated by the patients who develop asthma, secondary to chronic infection in the accessory sinuses.

The part which allergy plays in the pathogenesis of focal infection is not definitely known, but it is quite possible that a primary focus of infection might induce injury in distant parts of the body (in the joints for example), by the action of an allergen which would be discharged from the primary focus, and which would react on sensitive tissue in the joint. Swift,⁶ for example, cites rheumatic fever as a disease which presents evidence of an exciting focus of infection somewhere in the body, usually in the form of tonsillitis, sinusitis or other form of infection in the upper respiratory tract. These foci, in his opinion, represent areas where the *sensitizing substance* is produced, and from where it is distributed to the entire body, as well as localities where bacteria may be fed into the blood stream.

EXPERIMENTAL FOCAL INFECTION

Focal infections about the teeth have been produced experimentally by Rosenow, Haden, and others. Rosenow and Meisser⁷ devitalized the teeth of dogs, and then infected them with the staphylococcus from a case of nephritis. One dog developed pyelitis and cystitis, with marked calcareous deposits in the pelvis of the kidney. The same authors recovered streptococci from the infected teeth of patients with nephrolithiasis. The teeth of healthy dogs were then devitalized, and the pulp chambers of these teeth infected with heavy suspensions of the streptococci. The infected teeth became discolored, but remained firmly in place in the alveolar sockets. These infections caused rarefaction and absorption of bone in the periapical region without swelling or tenderness. Renal calculi or lesions in the medulla of the kidney developed in a high percentage of the dogs whose teeth were infected in this manner. Later, Meisser produced experimental ulcer of the stomach by the same procedure, that is, by injecting into the root canals of dogs streptococci obtained from the infected teeth of patients with gastric ulcer. Strangely enough, this experiment failed when an attempt was made to produce experimental arthritis by this method. Rosenow⁸ thought that this failure was due to the fact that streptococci from patients with chronic arthritis were less virulent than the other strains. It is more probable, however, that his failure can be explained by the high natural immunity which dogs possess against infections of the joints. In most of the experimental work reported by others the streptococci recovered from infected teeth have not been injected into the tooth sockets of animals, but directly into their veins. A large amount of research has been done along this line. Hendrici,⁹ Moody,¹⁰ Rosenow,¹¹ Price,¹² Meisser and Gardner,¹³ Haden, and others, have all made extensive studies of the lesions in rabbits which follow the injection of streptococci from infected teeth. This, of course, leads us to Rosenow's well-known theory of elective localization, following the intravenous injection of streptococci. His theory is that the streptococci which are present in infected tonsils, teeth, and sinuses have a special affinity for certain organs. Some localize in the joints, some in the heart, some in the appendix, gall-bladder or kidney, some in the gastric mucosa, etc. Rosenow found that, as a general rule, streptococci which have been obtained from various foci of infection tend to localize and produce lesions in animals corresponding to those in the patients, or in the animals, from which the microorganisms were originally isolated. In other words, a streptococcus from the teeth or tonsil of an arthritic tends to produce arthritis when injected into a rabbit. The streptococcus from a focus in a patient with pyelitis tends to produce pyelitis in the experimental animal, etc. Rosenow's¹⁴ doctrine of elective localization has not received universal acceptance, although I believe that there is more proof in its favor than there is against it. The carefully conducted experiments of Hendrici, Haden, and others have corroborated, in great part, Rosenow's findings.

RELATION OF FOCAL INFECTION TO SYSTEMIC DISEASE

It was remarked, in the beginning, that many individuals harbor foci of infection for years without suffering any constitutional ill effects from them. In most people, however, a chronic focus of infection will sooner or later make itself felt. This will usually occur when the resistance of the patient has been lowered by fatigue, exposure or some other disease. The distant manifestations of focal infection are many. Indeed, almost any organ of the body can suffer as a result of such infection. There are certain systemic infections, however, which we have learned to associate especially with focal infection, and it is these conditions which I now wish to discuss.

1. *Rheumatic Fever*.—Rheumatic fever is usually preceded by an acute infection in the upper respiratory tract. Usually this infection is an acute tonsillitis of streptococcal origin, although it may be an acute coryza, or an acute pharyngitis. Dochez and his co-workers¹⁵ have shown that acute respiratory infections, though caused by a filtrable virus, may activate the ordinary pathogens of the mouth and thereby increase their virulence. If we conceive of the streptococcus as having been acted on in this way, it would give us a working hypothesis which would explain the manner in which rheumatic fever is related to a primary focus in the nose and throat. Coburn¹⁶ has found that patients with rheumatic fever carry hemolytic streptococci in their throats, and that these streptococci persist during the active stage of the disease. He has also noted the presence of hemolytic streptococci in the throats of these patients during an acute respiratory infection preceding rheumatic fever. Coburn's work has excited a great deal of interest, and serves to strengthen still further the streptococcal theory of the etiology of rheumatic fever.

2. *Bacterial Endocarditis*.—A very high percentage of those who develop bacterial endocarditis give a preceding history of rheumatic fever. In some of those patients with streptococcal infection of the heart valves, the chronic focus of infection is readily located in the tonsils, teeth, or sinuses. This, however, is not always the case. Both rheumatic fever and bacterial endocarditis show high agglutinins with the streptococcus, usually the *Streptococcus viridans*. The theory that bacterial endocarditis is nothing more than a complication of rheumatic fever has always intrigued the writer. This theory, however, is not generally popular with students of this disease, although I believe that Clawson is a strong advocate of it.

3. *Chronic Arthritis*.—Chronic infectious, or so-called rheumatoid arthritis, is the disease associated most closely in the minds of physicians with focal infection. To Frank Billings¹⁷ and his school of co-workers the credit must go for bringing out this important connection. There is doubt in the minds of some investigators as to whether focal infection plays much part in the very sluggish indolent afebrile form of rheumatoid arthritis, since the removal of foci in these patients often fails to relieve the joint symptoms. On the

other hand, the active type of infectious arthritis with fever, warm swelling of the joints and severe secondary anemia is obviously an infection, and when foci are removed in such cases the clinical results are often spectacular. The writer,¹⁸ while admitting the soundness of the above point of view, feels that it is impossible to differentiate clinically or etiologically between these two types of arthritis. Both types show increased sedimentation rate of the red blood cells and agglutinins for the *Streptococcus hemolyticus*. I believe that they are one and the same disease. We have active and inactive forms of tuberculosis and syphilis, and so it is with rheumatoid arthritis. In some patients the reaction to the disease is sharp; in others it is sluggish. But I believe that both syndromes are forms of the same infection, and both secondary to primary foci of infection, usually in the sinuses, tonsils, or teeth. The same is true of muscular rheumatism and neuritis.

In some studies on the bacteriology of rheumatoid arthritis, which we conducted several years ago at Bellevue Hospital, attempt was made to correlate the streptococci isolated from the blood and joints of patients with rheumatoid arthritis, with streptococci isolated from various foci of infection in the same patient. In a number of cases streptococci morphologically, culturally and biologically identical were recovered from the blood, joint and focus of infection in the same patient. For example, in one case apparently identical strains of streptococci were recovered from the blood, from the joint and from infected tonsils. In another case identical strains were recovered from the blood, from the tonsils, and from an erythematous bulla on the skin. In still another case identical strains of streptococci were recovered from the blood, from the joint, and from an apical root abscess about one of the teeth. In all these instances the identity of the strains recovered was established biologically and culturally by agglutination and absorption tests.

Experimental Arthritis.—Numerous investigators have produced arthritis experimentally in rabbits and dogs by the intravenous injection of streptococci, but the production of experimental arthritis by the simple procedure of producing a primary focus of infection is more difficult. Moon,¹⁹ however, established a chronic focus of infection by putting a piece of cotton soaked with green streptococci in the peritoneal cavity of dogs. The dogs developed arthritis, and a verrucous endocarditis which was not dissimilar from a rheumatic endocarditis. Histologically, the collection of cells in the heart muscles and valves were suggestive of Aschoff bodies.

As to the relative importance of various foci, the writer has always attached most importance to the tonsils as a focus of infection in rheumatoid arthritis; but my friend, Ralph Boots of New York, gives infected sinuses the first place. We both feel that infected teeth have been over-stressed in this disease, though undoubtedly certain cases are referable to root abscesses.

Uveitis, iritis, and iridocyclitis are not rare complications of rheumatic fever and rheumatoid arthritis, and, like the joint manifestations, are

presumably metastatic infections from an original focus. In these infections of the eye, the sinuses are probably more frequently to blame than the other primary foci of infection such as the tonsils and teeth. I believe that the laryngologists will agree that chronic infection of the ethmoid and sphenoid cells is most frequently responsible for these eye conditions.

Erythema nodosum is another condition frequently seen with rheumatoid arthritis or rheumatic fever, and like iritis, it is usually referable to some primary focus of infection. Erythema nodosum, in most cases, is favorably affected by the removal of the original focus. Billings and Rosenow and other more recent writers have looked upon acute appendicitis and cholecystitis as hematogenous infections secondary to some primary focus. In appendicitis, fecal stones and other mechanical disturbances may cause obstruction of the lumen of the appendix and thereby establish conditions favorable for infection. Rosenow²⁰ isolated a strain of streptococcus from an infected gall-bladder, and found that it was identical morphologically and culturally with the strain which he had isolated from the same patient's tonsils. Both strains, when injected intravenously into animals, produced cholecystitis in them.

Pathologists are coming more and more to look upon glomerular nephritis as secondary to some preceding infection. LeCount and Jackson²¹ were able to produce glomerular nephritis in animals by the intravenous injection of streptococci isolated from the tonsils of patients suffering from epidemic sore-throat. Billings claimed that, in his clinic, strains of streptococci had been isolated from infected tonsils or other apparent foci of infection of patients suffering from nephritis, and that these streptococci, when injected intravenously into rabbits, almost inevitably caused glomerular nephritis with albuminous urine containing many bloody casts.

This brief review of the relation of focal infection to systemic disease is far from complete, but indicates what an important place focal infection occupies in the modern treatment of disease. A distinguished colleague has once said that the present-day practice of medicine consists largely in an attempt to discover and eradicate foci of infection.

DIAGNOSIS OF FOCAL INFECTION

The recognition of foci of infection may be very easy or very difficult, depending upon various circumstances. Even with all the modern methods of diagnosis at our command, foci of infection are still frequently overlooked in the best clinics. Furthermore, the decision as to whether or not infection exists in a certain organ is sometimes very difficult. Let us consider, briefly, the diagnosis of the more prevalent foci of infection.

The Tonsils.—What constitutes a chronically infected tonsil? Many sharp debates are held on this subject every day in hospitals and in physicians' offices. An enlarged, congested, cryptic tonsil from which pus can be squeezed offers no

problem; it is obviously infected. Such tonsils frequently cause enlargement of the cervical lymph glands. Small buried tonsils, bound down by adhesions and associated with congested pillars, readily arouse suspicion. Then there is the tonsil stump, which frequently causes more toxic symptoms than the original tonsil did. Finally, there is the apparently normal tonsil which contains small abscesses in its interior. Recently efforts have been made to diagnose infected tonsils and teeth by examination of the blood. V. Schmidt,²² for example, found that when an infected tonsil was massaged, there was forced into the circulation certain toxins which caused an increase of the polymorphonuclearcytes, varying from one hundred to six thousand. On the other hand, when the normal tonsil was massaged, there was no increase in the leukocytes; or, perhaps, even temporary leukopenia resulted.

Worms and Le Mee²³ corroborated the findings of Schmidt. They found that when the tonsil was massaged, or better still, when it was subjected to suction, a leukocytosis occurred only in tonsils that were actively infected. However, they were not able to corroborate Schmidt as to normal tonsils; that is, they were not able to observe leukopenia following massage or suction of normal tonsils. Both these writers noted a leukocytosis coming on within four to five hours after an infected tonsil had been massaged. Gording and Björn-Hansen²⁴ have recently published an interesting monograph on focal infection and its relation to joint disease. They divided their cases of primary chronic polyarthritis into two groups: those associated with definite foci, and those in whom no focal infection could be demonstrated. In the former group, the leukocytes were found elevated, and a shift to the left was present; whereas in those cases of polyarthritis without demonstrable foci of infection, the Schilling-count usually failed to reveal any increase in the immature cells. These authors further noticed that the shift to the left was usually much less noticeable after the foci of infection had been removed. J. H. Richards²⁵ has claimed that when infected tonsils or teeth are massaged, or otherwise subjected to trauma, bacteria—mostly streptococci—can be demonstrated in the blood-stream shortly afterward.

Infected Teeth.—Here again we are on controversial ground. The diagnosis of a typical apical abscess, or granuloma, is easy enough, but there are many intermediary abnormalities which give rise to debate. There are some who insist that all devitalized teeth are infected, but this doctrine is not accepted by the more conservative elements in the profession.

Sinuses.—The diagnosis of acute or chronic sinus infection can usually be made by careful physical examination, transillumination and x-rays. However, when we come to the question of obscure infections in the ethmoid and sphenoid cells, we are again on debatable ground. Chronic postnasal dripping is usually looked upon as a sign of sinus involvement, but in some cases this symptom is not associated with any clouding of the ethmoid or sphenoid cells. There is another

group of cases in which x-rays show clouding of the sinuses due to thickening of the mucous membrane. Even in such patients, the sinuses may contain little or no exudate. There is often the question in these cases as to just how significant the sinus is as a focus of infection.

Intrathoracic and intra-abdominal foci are usually more definite, and yield fairly well to modern methods of diagnosis. Chronic infections of the genito-urinary tract can usually be determined by careful study.

Summarizing then, we may say that the diagnosis of focal infection is usually achieved by thorough physical examination, and careful x-ray and bacteriological studies. In addition to those methods we now have some newer blood-tests, such as the Schilling-count and the sedimentation rate of red-blood cells, which may be most helpful in doubtful cases.

TREATMENT OF FOCAL INFECTION

Tonsils.—The important principles in the treatment of focal infection are promptness and thoroughness. The offending focus must be removed at once, and removed completely if good results are to be expected. In the opinion of the writer, the only treatment for infected tonsils is tonsillectomy. I am not very sympathetic with the removal of tonsils by electro-coagulation. The tonsils should not only be completely removed, but they should be resected out with as little trauma as possible in order to avoid exacerbation of the systemic condition. This is particularly noticeable in the case of chronic arthritis, where rough handling of the tonsil may bring on a sharp increase of joint pain and swelling.

Teeth.—Infected teeth should be extracted, but it is better practice to remove only two or three at a sitting. The attempt to drain apical abscesses through the root canal has not proved very satisfactory.

Sinuses.—The handling of chronic sinuses is still a controversial field, especially as regards infected ethmoid and sphenoid cells. This is surely one of the most vexing problems in modern medicine. It is comparatively simple to establish good drainage in a chronically infected antrum, but just what are the indications for radical surgery on the ethmoid and sphenoid cells, and how much benefit can we expect from such operations? Chronic ethmoid and sphenoid infections sometimes respond to conservative methods of treatment, such as suction and argyrol packs, and certainly a great many are helped by residence in a dry, hot climate, such as that of Arizona.

Appendix, Gall-bladder and Intestinal Foci.—Foci of infection in the appendix, gall-bladder and intestinal tract always present problems which require the exercise of the best clinical judgment. How much systemic improvement can we expect from the removal of an infected gall-bladder? In a middle-aged woman, for example, where exacerbations in the gall-bladder infection are associated with flare-ups in the joints, we can be fairly certain that removal of the gall-bladder will give definite relief; but where no such close asso-

ciation is demonstrable, the chance of systemic improvement after operation is not so certain.

The same holds true with regard to chronic infections in the genito-urinary tract, especially if they are low-grade in character.

The following is a case in point:

H. B., male, age fifty-three.

April, 1932.—Onset of arthritis, with pain and swelling of various large joints, especially the knees and the ankles. History of several attacks of renal colic.

September, 1932.—Admitted to New York Hospital. Chronically ill. Both knees and feet swollen. Chronic ethmoiditis. Blood pressure, 190/110. Trace of albumin and red blood cells in urine. Secondary anemia. White blood cells, 5,300. Immature cells 14 per cent. X-ray of kidneys showed mulberry stone in the pelvis of right kidney.

Comment.—The problem in this case was: how much benefit, in respect to the joints, could be expected from removal of the kidney stone, and was such an operation justified in view of the obviously poor condition of the patient? In addition to his arthritis, he had high blood pressure, some evidence of nephritis, a heart muscle which was none too good and a chronic ethmoiditis. Several surgeons were frankly opposed to operation in this case, especially in view of the fact that the stone was silent and there was practically no pus in the urine. They argued that the sinuses and not the stone were the probable focus of infection. After considerable debate, however, the stone was finally removed, October 22, 1932. The patient stood the operation remarkably well, and within six weeks after removal of the stone his joints were free from pain and much less swollen. Three months after the operation the blood pressure dropped to 145/80 and he was riding horseback. He is now working hard in his profession, and to all intents and purposes a well man.

In addition to the treatment of the focus proper, the patient who has been pulled down by some chronic focus of infection must be rehabilitated by the usual measures. The anemia will need iron and other tonics; the loss of weight, a high calory diet rich in vitamins; and in many instances, particularly where the joints are involved, vaccine therapy seems to have a definite value. Following the elimination of the focus, the patient will often need a prolonged rest cure, preferably away from home at some spa, or perhaps nothing more elaborate than the mountains or seaside. Some very able physicians prefer to build up the patient before the focus of infection is removed. In exceptional cases, this may be necessary; but on the whole it seems to me more logical to remove the focus first, and then build up the patient. Occasionally patients make a spectacular recovery following the removal of a focus of infection. As a general rule, however, convalescence is slow. Three to six months, or even more time may elapse before the full benefit of the treatment is achieved.

SUMMARY

The recognition and treatment of focal infection is one of the fundamental principles in the practice of medicine. While infectious arthritis is perhaps the commonest of the systemic effects

of focal infection, it must be remembered that almost any other organ or tissue can suffer injury as a result of focal infection. The complete removal of foci of infection should be followed by a carefully planned program of rehabilitation of the patient.

33 East Sixty-first Street.

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LOS ANGELES COUNTY HOSPITAL— DEDICATORY ADDRESS*

By PERCY T. MAGAN, M. D.
Los Angeles

IN laying upon me the responsibility of speaking in behalf of you all at this inspiring ceremony, you have done me a great honor—one far beyond the work of my poor life to merit or deserve. In the midst of these wondrous surroundings, and this reverent setting, I can only offer up a wee prayer that I may not fail of expressing those touching thoughts which I am confident you are pondering in your innermost hearts.

We are gathered together this afternoon in the name of the people of Los Angeles County to hallow, to consecrate and to dedicate this magnificent temple of healing to earth's great cause of caring for her poor in their hour of suffering, affliction, and distress. It is meet and right that we should do this, and that here and now we should place on history's deathless page those highly spiritual purposes which have motivated the hearts of our citizens, in bringing this beautiful sanctuary for the sick—in its stately proportions so like unto a cathedral—safely through the hard hours of its conception, steadily throughout the troubled years of economic stress and storm during which it had its prenatal life, to this blessed moment of the fullness of its birth and baptism.

Let us bring forth from memory's halls a scene of the long ago when the warrior Joshua had led the people of Israel out of that terrible wilderness, dry-shod across the Jordan into the Promised Land. He called twelve men, from every tribe a man, and commanded that each should take a stone upon his shoulder out of the river bed and set it up in the place where they should lodge that night—"That this may be a sign among you, *that when your children shall ask their fathers in time to come, saying, 'What mean ye by these stones?'* Then shall ye answer them, that the waters of Jordan were cut off before the ark of the covenant of the Lord; when it passed over Jordan . . . and these stones shall be for a memorial unto the children of Israel forever." Such was the mighty miracle to be commemorated in the memorial of *those* stones.

"WHAT MEAN YE BY THESE STONES?"

And now, Mr. Chairman and Friends, may I take upon my lips the noble words of the stalwart Joshua and ask of you this day that age-old question—"What mean ye by *these* stones?" Let me answer for you:

You mean that this vast structure which surrounds us, builded and equipped at a cost of some 13,000,000 golden ducats, is the most costly single gift ever bestowed upon their sick poor by the men and women of any community of comparable size in any age or any clime. Amen; so let it be. It has been given with little complaining and much of a spirit of graciousness in an effort,

*The Acute Unit of the Los Angeles County Hospital division of the Los Angeles County General Hospital was dedicated on April 15, 1934.

*Other articles in this issue on Los Angeles County Hospital are: article by Doctor Barrow, page 406; editorial, page 427; Miscellany, page 475.



Fig. 1.—Side view of the Acute Unit of the Los Angeles County Hospital.

it may sometimes be only dimly understood, to follow in the footsteps of the Great Master who commissioned his disciples, "Go preach, saying, The Kingdom of heaven is at hand. Heal the sick, cleanse the lepers, raise the dead, cast out devils: freely ye have received, freely give." Was it not Emerson who wrote that "The Gothic cathedrals were built when the builder, the priest, and the people were overpowered by their faith"? Yea, verily, and here also there existed an overpowering faith in the hearts of the Supervisors, of the Medical Board, of the physicians and thousands of others, that this stupendous monument to the spirit of love for the sick poor was called forth from Above. As we look beneath the surface to those deep-moving things which guide so well and guard so truly our lives, this is what the eye of faith enables us to see.

"What mean ye by these stones?" I ask and answer again: You mean that all of this hath been wrought by stout, unfaltering souls in an hour the darkest that our nation and our state have ever been suffered to endure. And yet, all things considered, this massive pile hath come together, in spite of the turmoil of our time, the restless spirit of change and revolution everywhere seething within our coasts, the ever present strife of tongues—it hath come together, I say, almost like unto that great temple which Solomon upreared to the glory of his God—so that, using

a similitude from the Great Book, it may be said of this place, "There was neither hammer nor ax nor any tool of iron heard in the house while it was building." In an hour when men's hearts have been failing them for fear, not knowing what things were coming upon the earth, this great edifice, as the language of the Scriptures puts it, fitly framed together and compacted by that which every joint supplieth, according to the effectual working in the measure of every part, hath been growing into a temple where the halt and the maimed, and the blind and the lame may come to be healed of their diseases. This memorial meaneth that more than a miracle hath been wrought here in that this mighty fabric hath been knit together when so many thousands of undertakings have been halted, and stand as gaunt and mute testimony to the devastating hardness of the hour.

L'HOTEL DIEU—THE HOSPITAL—GOD'S HOTEL

"What mean ye by these stones?" I answer once more: They are telling to man and woman-kind that this is a *Hospital*—a name which cometh from the same root word as *hospitality*. It is akin to the word "hostel," an old form of our word *hotel*. In olden days in France there was a very famous hospital known as *L'Hôtel Dieu*—"God's Hotel"—because there the poor and afflicted could come without money and without price. How different, however, the enlightenment, the spirit



Fig 2.—Entrance perspective to the Acute Unit of the Los Angeles County Hospital division of the Los Angeles County General Hospital.

of this place, to that which prevailed in years of yore! To an Englishman, a great philanthropist, John Howard (1726-1790), we owe the first notable effort to transform the "lazar-houses," or public hospitals, of his day into something faintly resembling the magnificent public institutions of our time. He visited the lazar-houses in all lands, not only in the West but also in the pestilential Orient, the mother of all plagues and epidemics. He tells us that in Malta he found about five hundred patients in the hospital, "served by the most ragged, unfeeling and inhumane persons I ever saw." There were twenty-two of these attendants for five hundred patients. "At the same time," he says, "I observed that near forty attendants were kept to take care of twenty-six horses and the same number of mules in the Grand Master's stables: and that *there* all was clean. I cannot help adding that in the center of each of these stables there was a fountain out of which water was constantly running into a stone basin, but that in the hospital, though there was indeed a place for a fountain, there was no water. . . . At Galatea I found the sick lying on the floors. All were neglected, for none of the faculty would attend them. In the midst, however, of this neglect of human beings, I saw an *asylum for cats*." He sought passage on a plague-infested ship sailing from Smyrna for Venice, so that the authorities would be obliged to intern him for a period in the

lazar-house (or public hospital) before he would be permitted liberty to go about the city. And this he did in order to find out just how the poor were treated in that awful place. Thank God, his work succeeded; and when the hand of death was laid upon him, he had the satisfaction of knowing that he had won his fight, and that hospitals had been brought into the lime light of publicity.

How different the conditions existing in this sanctuary for the indigent sick! The immaculate cleanliness of the place has come to be a proverb. Every piece of equipment that science can devise for the benefit of those who are ill is to be found here. Every medical and surgical instrument known to the profession is at hand for the physician's use. There are hospitals which are more luxurious; but there are none which can boast of a greater number of necessary comforts or more skillful care. And lastly, what a fine spiritual note was that which my dear friend, Mr. Norman Martin, brought to this place many years ago, and which has since become the motto on its shield and buckler:

"SERVICE, WITH A HEART"

To the foundations and walls of this building the bosom of the earth has yielded many precious materials from her store—concrete and crushed rock, brick and tile, steel and copper, granite and marble. They are all wonderful—they are all

impressive. But they are all dead things; no life pulsates through veins in their being. Their structures are silent as those sepulchres in which the bodies of those who have gone before us lie mouldering in the dust. The silent artillery of time laid them prone and low, and their voices speak to us no more. So it is, dear friends, with this wondrously intricate and castelated structure. The stones in its walls and halls can only yield a mocking echo, they do not live or breathe or speak.

But while the stones in these walls are silent, like sentinels in their towering grandeur standing guard, there are other stones within this place. May I take the words of the Apostle Peter and call them "living stones" who, under the guiding hands of the administrators of this institution, have been builded into "a spiritual house"—I am using the language of the Great Book again—"for a consecrated priesthood"—the ministry of man and womankind for the sick. I speak of the house staff, of those "living stones" who are giving good measure of life's devotion in this place. I am paying homage to all from the greatest to the least—to high officers, resident physicians, interns, nurses, dietitians, cooks, orderlies, to the humblest servant toiling here. I am uttering a trustful prayer in their behalf with full confidence that when life's day for them shall wester to its close, they may be found worthy of a tribute in spirit and sentiment like unto that dedicated to the memory of Dr. David Livingstone, pioneer Apostle of Darkest Africa. When he was laid away in Westminster Abbey, that temple of silence and sadness where so many of England's illustrious dead lie sleeping, these lines were spoken:

"Open the Abbey doors and bear him in

To sleep with king and statesman, chief and sage,
The missionary come of weaver-kin,

But great by work that brooks no lower wage.

"He needs no epitaph to guard a name

Which men shall prize while worthy work is known;
He lived and died for good—be that his fame;

Let marble crumble: this is Living-stone."

WORK OF THE ATTENDING STAFF

"What mean ye by these stones?" Your muse must take up his parable again: I must speak of the Attending Staff,—the physicians and surgeons, who are the very life blood, the pulsating heart of the great work of caring day by day, and night by night, for nigh unto 2,000 unfortunate folk. For many a long year, without money and without price, freely, graciously, and in no stinted fashion, these quiet men have laid their labor on the altar of earth's need. First-page headlines have ne'er emblazoned their good deeds to the gaze of their fellow-beings. Nor are their names and titles engraved in granite corner-stones. Nay, verily! Rather, must these disciples of the Man of Galilee—the Great Physician—turn for satisfaction and comfort to the sentiments of a sweet-souled Abbé of France, who once in an elder day wrote down immortal thoughts in language almost divine:

"He who would build a church to God and not to fame,
Must never mark the marble with his name."

And the reason for all of this lies in the fact that the practice of medicine is neither a business nor a trade. It is, thank God, a profession. A man's business, we say, is that of operating a department store, or contracting for buildings, or constructing roads. A carpenter or blacksmith is not rated as following a profession, rather he is called a tradesman, and his work a trade. Whence came these differences of nomenclature?

In the early days of the Christian era and into the Middle Ages, the word *profession* was endowed with more or less of a spiritual significance. It is derived from the Latin *pro* meaning "before," and *fateor*—"to confess." The word signifies the act of professing or declaring one's faith. In those days, when a person bound himself to a sacred order of the Roman Catholic Church, he was said to have professed that order.

In those times, too, three, and only three, of life's lines of endeavor were considered sufficiently idealistic, altruistic and spiritual to be termed professions:

1. The Ministry of the Word of God.
2. The Advocacy of the Law.
3. The Healing of the Sick.

During later times, the word *profession* has been given a much wider scope! And it may be well for us who live in these intensely commercial and material times to meditate concerning the high and holy place accorded to the work of a physician in the days of the long ago. People looked for consecrated and sacrificial motives and lives in those whose duty it was to give aid and comfort during the agonized hours of birth, the fevered watches of disease, and the dark moments when the Angel of Death caused the life spark to flicker and to fail. We cannot blame the tired voyager who pleads to be assured as to the character-credentials of the pilot "who undertakes to guide the ship of life through the treacherous waters that so narrowly separate the island of time from the mainland of eternity."

IN CONCLUSION

And now, Mr. Chairman, I have come to the even-song of this, my dedication. Only one more stanza remains to be spoken, in answer to the question of Holy Story: "What mean ye by these stones?" You mean that here you have not only erected a hostel for the suffering, but you have also upreared a great temple of learning where those who will, please God, in time succeed to the mission of the physicians who now minister in this place may under their guiding eye receive instruction in the healing art, and as its true disciples may be baptized into the blest ministry of medicine. In the name of the School of Medicine of our beloved University of Southern California, and in the name of the College of Medical Evangelists which it is my privilege to represent, I beg to thank you for the great provision you have made for future generations.

On the Johnson Gate opening into the college yard of Harvard University is inscribed a passage taken from an old time document published by

the Puritan Fathers who founded the Colony of Massachusetts Bay, and thus it quaintly reads:

"After God had carried us safe to New England
And we had builded our houses
Provided necessaries for our liveli hood
Reard convenient places for Gods worship
And settled the Civill Government
One of the next things we longed for
And looked after was to advance learning
And perpetuate it to posterity
Dreading to leave an illiterate ministry
To the churches when our present ministers
Shall lie in the dust."

That prayer which was breathed in the dawn of our history, by those lonely but rugged founders of this land, pleading for the guidance of God to help them establish a seat of learning at Harvard that, when their present ministers should have passed into the shadow of the dark valley, there might be others prepared to keep watch and ward over souls in their stead, that prayer, dear friends, we would make our own today; not at this particular hour for our ministers, but for the doctors and nurses who will minister here in the years that are yet unborn. Humbly do we beseech Thee, O Thou Great God in Heaven Above, that, when the strings of the harps of our lives shall be muted; when these wards shall know our walk and way, and hear our voices no more, forever; that in humility we may have in this place, so taught our sons and daughters, not only in the science, but in the spirituality of medicine, that thousands of afflicted ones who will enter in within these portals shall say of them, as was said of our blessed Lord and Savior in the long ago: "Surely He hath borne our griefs and carried our sorrows: Himself took our infirmities and bare our sicknesses." Amen.

Boyle and Michigan Avenues.

LOS ANGELES COUNTY HOSPITAL—SOME REMARKS*

By JOHN V. BARROW, M. D.
Los Angeles

THIS building marks Medicine's contribution to enduring civilization. It stands as a memorial to the principle of service from the more fortunate to the more unfortunate. Today we rededicate ourselves to this age-old principle of service, handed down to us more than 2,500 years ago. By this dedication today the spirit of helpfulness born within us, espoused by teachers and philosophers of the ages, receives a new birth. We have met here that this sacred principle should receive new sustenance in this day of bewildering civilization. This building seals a pledge from us that the unfortunate needy of our community are our sacred heritage; that we shall not permit the helpless sick to go unattended in the midst of joy and plenty. The principle on which this structure stands is our best guarantee of an enduring civilization. This torch of service shall be held high

by the arms of those who have means to give and by those who have hearts to serve. Here a worthy citizenry upholds the arms of physician and nurse.

Today we dedicate this building to the continuation of that principle of service to the unfortunate sick. We jealously guard these doors against the entrance of the unworthy. We charge the gatekeepers of public trust that those able to care for themselves enter not here. The financially undeserving who pass these gates crowd out the needy and steal from the givers of sustenance and service. They thwart the principle that our deserving poor shall not wander helplessly in our streets, or suffer the pangs of hunger and disease by the wayside and in hidden places unattended. This building is a comfort to the givers in their daily hours of toil. It is their guarantee that their restful dreams through the night shall be made sweeter by the assurance that skillful hands minister with lavish kindness to the unfortunate sick of their community.

This service knows no race nor creed, nor previous condition of servitude. It bars neither saint nor sinner. This institution has a cosmopolitan population unsurpassed. In it are housed the unfortunates from fifty-two countries embracing sixty nationalities. Its occupants consist of 78 per cent of our own native-born. Our sister republic, Mexico, has 15 per cent, and our own colored race has 6 per cent. Our inmates from foreign lands surely must compare the care received in this institution with the care of the unfortunate in their native lands. Many of them can picture wandering groups—sick, hungry, unclad and unsheltered—turned aside, more from public inattention than from governmental desire for neglect. Those un-



Fig. 1.—One of the twenty surgical operating rooms in the Acute Unit.

*Remarks on behalf of the Attending Staff at the dedication of the Acute Unit of the Los Angeles County Hospital on April 15, 1934.



Fig. 2.—Detail of entrance doors of Acute Unit of Los Angeles County Hospital (facing State Street).

fortunate groups cannot be a part of the picture in our own land.

The ideal care of this institution demands public assistance in social service and in the building of a public conscience that the poor be not crowded out of this house of service by the modern economic chiseler. Let him who enters undeservedly know that he is in every sense a cheater, and truly unpatriotic—for patriotism, like charity, begins at home.

The dedication of this building should bring to the attention of our community the unselfishly contributed work of some three or four hundred physicians, chosen with searching care from the best of our profession. It is their work that makes this institution possible. It is their work that makes entrance here sought. Their annual contribution in service far overbalances that of the taxpayers. Let the public, then, here today remember to place on the dedication altar of this monumental structure—alongside their gifts of steel and stone—that still more precious gift, the patriotic service of her citizen physicians and surgeons, by whose labor this structure shall endure.

1930 Wilshire Boulevard.

SELVATIC PLAGUE—ITS PRESENT STATUS IN CALIFORNIA*

By K. F. MEYER, PH.D.
San Francisco

IT is recognized quite universally that plague persists as a widespread epidemic among rats and other wild rodents. The most recent rat-borne plague has spread as a pandemic from a focus which developed in Hong Kong in 1894. Traveling along the trade routes of man it reached many ports and countries, where the rats were permitted to share with man his houses and his food supplies. Thus, in the countries with primitive civilization an intimate interplay of rodents and man favored the catastrophic outbreaks of plague which already claimed millions of victims. Experience

has taught that invariably an epidemic of rat plague precedes the appearance of the disease in man. Such a state of affairs was responsible for the epidemic of bubonic plague in San Francisco in 1900 and in 1907.

SELVATIC PLAGUE—MEANING OF THE TERM

On the other hand, the widespread liability of wild rodents to the plague bacillus has created large reservoirs of this pasteurellosis, which have existed for centuries in Asia or are in process of being created in other continents. This type of plague infection spreads slowly and insidiously from colony to colony of rodents, and is apparently independent of the usual lines of communication. It localizes principally in countries of a steppe or veldt-like character. The title *selvatic plague* (Jorge, *Offic. internat. d'Hyg. Publ.*, 1928, 310, 435), is, therefore, quite appropriate. This source gives rise to sporadic cases among those who as hunters, trappers, and agriculturists or others are engaged in some branch of open-air life. The cases of bubonic plague which occurred in California between 1910 and 1924 (fifty-five cases with thirty-two deaths) belong to this type.

SELVATIC AND RAT-BORNE PLAGUE

There is a definite relationship between selvatic and rat-borne plague. Two formidable centers of rodent plague have existed for centuries in Transbaikalia and in Mongolia. From the latter developed the Manchurian pneumonic epidemic of 1910, which caused the death of 60,000 persons without a single recovery. From the steppes of south-eastern Russia and eastern Turkestan emanated the seeds for the black death of 1347 to 1349. Selvatic plague gives rise to pneumonic plague, provided overcrowding and climatic conditions of a low temperature and high humidity are favorable. That a secondary pneumonia which follows an exposure to a diseased squirrel may change to a primary pneumonia, is illustrated by an outbreak of pneumonic plague in Oakland, September, 1919 (fourteen cases and thirteen deaths). In fact, it is clearly demonstrated that once primary pneumonic plague has begun, other cases follow with great rapidity. An example of this sort presented itself at Los Angeles in 1924 (thirty-two cases with thirty deaths). The primary pneumonic plague was definitely preceded by bubonic type of rat origin. However, it is not unlikely that the rats originally contracted their plague infection from the squirrels.

Many hypotheses have been advanced to explain the pneumonic tendencies of wild rodent plague. Experimental evidence indicates that the strains of *Bacillus pestis* isolated from wild rodents possess a high virulence and a definite pneumotropism. This tendency is greatly diminished by repeated rat passages. The observations at Los Angeles confirm the recognized fact that centers of selvatic plague may give rise to epidemics of rat plague. Such transmissions have been repeatedly observed in Manchuria. It is not improbable that the epidemic in Hong Kong, which carried plague to the world, originated in the Mongolian steppe.

* From the Hooper Foundation for Medical Research of the University of California. Submitted by request.

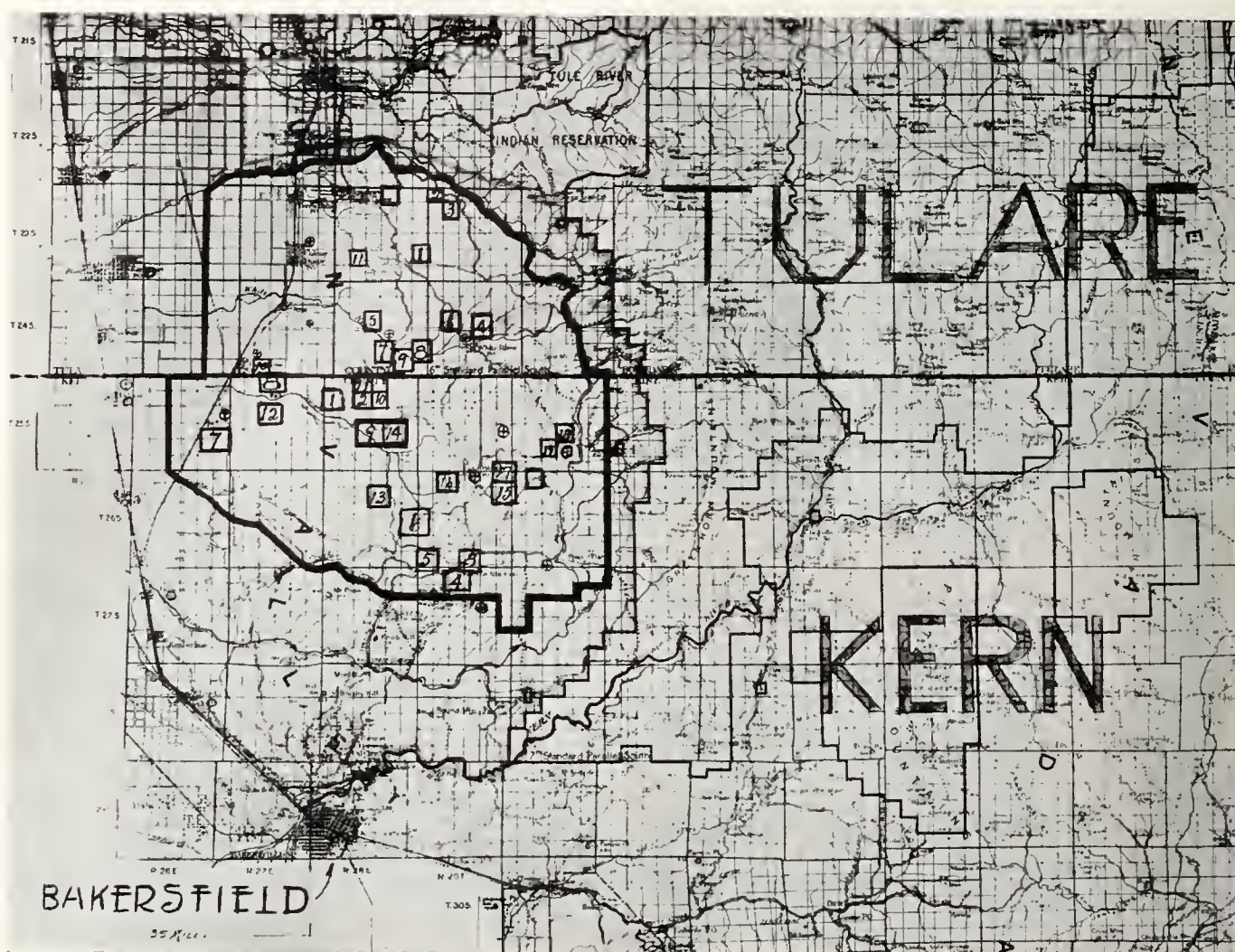


Fig. 1.—Map of district in Kern and Tulare Counties, in which squirrel plague foci have been found.

This peculiar chain of infection from wild rodent to rat and then to man has, however, reversed itself following the pandemic of 1894 and 1896. Three, possibly more, new selvatic plague areas have been established in California, in South Africa and in the Argentine. In the light of present-day knowledge it is generally agreed that plague was brought into Contra Costa County by rats on ships arriving here from some plague-infected port prior to 1900 or shortly after.

THE GROUND SQUIRREL AS A SELVATIC PLAGUE RESERVOIR

Through contact with the ground squirrel (*Citellus beecheyi*) a reservoir has been created which spreads in a manner characteristic of selvatic plague. Between 1903 and 1914 it has slowly but progressively invaded the coast counties south of the Sacramento River. Infected squirrels have been found as far south as Los Angeles County. Associated with the squirrel are other rodents, such as the brush rat (*Neotoma fuscipes*), which may serve as complementary hosts. The liability of the wild rodents to plague constitutes the main permanent reservoir of the disease which perpetrates the infection from year to year, and from century to century. While such influences as the agrarian revolution of the seventeenth century markedly reduced the malady among rats and man in western Europe, there is no assurance that under the pressure of drought and famine in the steppe regions a wholesale emigration of the wild rodents

toward the fertile human habitations may not lead to a fresh train of rat infection with all its consequences.

SQUIRREL PLAGUE IN CALIFORNIA*

These facts must be fully appreciated in a consideration of the plague situation which confronts California.

Before March, 1934, plague-infected squirrels have been demonstrated in the following counties: Contra Costa, Alameda, Los Angeles, Merced, Monterey, San Benito, San Joaquin, Santa Barbara, Santa Clara, Santa Cruz, Stanislaus, San Mateo, San Luis Obispo, and Ventura. Reports concerning an increased mortality among squirrels in the Lynn Valley near Glennville, Kern County, were received by the State Department of Public Health in the summer of 1933. During July and September, 1083 squirrels were killed by the survey crew. However, the cause of the mortality was not determined at that time. In March, 1934, the owners of ranches lying in an area of six square miles, both in Kern and Tulare counties, approximately thirty miles north and east of Bakersfield, and approximately sixteen miles east of Delano, Tulare County, noted a great many dead squirrels. An immediate survey by the plague crew supplied the Hooper Foundation and the State Bacteriological Laboratory with squirrels which revealed anatomical lesions suggestive of plague and, by

* See, also, pages 425 and 475 for other discussions of this subject.

cultural methods, a very virulent strain of *Bacillus pestis*. The rodents presented the picture of acute septicemic plague with slight involvement of the lymph nodes or viscera. Guinea-pigs infected percutaneously with the plague strains isolated from these rodents succumbed to acute septicemic plague within four to five days.

Intensive hunting surveys were promptly instituted, and by the middle of May the extent of the area which harbors plague-infected squirrels has been rather closely defined. The findings of dead or diseased squirrels are indicated on the map. The area covers, in Kern County, approximately 409 square miles or 220,160 acres, while in Tulare County 286 square miles or approximately 183,000 acres are involved. A total area under suspicion for plague covers 945 square miles in Kern and 540 square miles in Tulare County. Systematic surveys are in progress, and many districts and valleys closely adjacent to the infected zone have been or are in the process of being surveyed. Particular attention is being paid to the districts adjacent to large human habitations and summer resorts. From a technical point of view these surveys offer many difficulties, since the character of the territory involved is quite different from that previously searched for latent rodent plague. The barren hills and bottomlands are heavily infested with rattlesnakes. Hunting is tedious and time-consuming. Close to 6,000 squirrels (3,485 shot; 2,551 found dead) have been dissected and 162 have been proved by laboratory tests to be infected with *Bacillus pestis*. In Kern County ninety-four and in Tulare County sixty-eight diseased squirrels have been found. Despite the difficulties the survey crews have pushed the campaign in a relentless manner, with an admirable devotion to the task and an excellent *esprit de corps*.

TOPOGRAPHY OF THE CALIFORNIA COUNTIES INVOLVED

The topography of the country involved is typically veldt-like in character, consequently an excellent territory for an uncontrolled proliferation of rodents. The gently rolling hills, almost barren of vegetation and without any visible water, have a top adobe or lime kaolin formation dotted with bizarre masses of rocks. The latter are honey-combed with squirrel burrows. The westerly section of the area spreads into pasture lands and orchards. The eastern section of the infected area extends into higher foothill or river bottomland with sycamore and oak trees. There the burrows are not so readily discernible, but a brief visit leaves no doubt that the territory is heavily infested with young and old squirrels. Occasionally evidence in the form of dead squirrels at the opening of the burrow or fly maggots leaving the holes, together with swarms of buzzards, is seen.

Reliable reports indicate that a highly fatal disease is slowly passing through the rodent population. However, the infection has not completely eradicated the squirrels even in the most heavily infected areas. In fact, lying between two infected ranches extensive colonies of rodents may still be observed. Doubtless the young squirrels will, in the course of the present epidemic, become

victims of plague, while many of the older rodents may survive and, with a latent plague infection, retain the potential seed for the recurrence of a similar epidemic.

It is most fortunate that the area is very sparsely populated. Probably not more than seven hundred persons live in its small towns and settlements. Such former famous relay stations for traffic to mines in the national forests, as Grant's Station and White River, have only about half a dozen families living within a radius of five miles. The eleven schoolhouses located in the infected territory have received special attention and eradication measures have been promptly instituted. No human cases of plague have been reported this year.

POSSIBLE ORIGIN OF THE NEW PLAGUE TERRITORY

Concerning the origin of this new plague-infected territory, no definite conclusions have as yet been reached. Those who have surveyed the districts are fully convinced that the epidemic which wiped out the squirrel population in the vicinity of Glenville was, unquestionably, plague. But how it reached the western foothills of the Sierra Nevadas has not been determined. So far no connecting links between the old and new foci have been established. The nearest district which harbors infected squirrels is located 120 miles toward the west in San Luis Obispo County. It is rather significant that, on account of lack of funds, the wild rodent population of the infected area has, since 1930, increased at an enormous rate. In fact, complaints concerning damage done to agriculture by the squirrels is quite universal throughout both counties.

According to Elton, it is well known that the steppe rodents increase for several years and are then decimated by plague. These epidemic fluctuations obey a periodic law or give sinusoidal curves. Elton believes that there is a double periodicity of three to four years, and another of one to eleven years, the latter perhaps corresponding to climatic variations possibly related to the sun-spot cycles. When and how plague was planted in the Kern and Tulare counties remains a problem for further investigation. That it operated in the fall of 1933 is doubtless correct. The infection was continued from the fall to the spring through the fleas which prey upon the hibernating rodents. The last dry and warm winter favored a very high infestation of the rodents with insects. Incomplete data show that nearly 90 per cent of the squirrels carried not less than ten fleas. Therefore conditions favorable for the spread of plague among the rodents existed early in March and have continued during the subsequent five weeks.

Cannibalism among squirrels and in all probability buzzards, is a complementary factor in the dissemination of the disease.

PROTECTIVE MEASURES INSTITUTED BY STATE BOARD OF HEALTH

In view of these conditions the California State Department of Public Health and the State Department of Agriculture have instituted the following protective measures:

1. The ranchers and people living in the affected area have been advised of the danger inherent to the handling of dead or sick squirrels. At regular intervals prominent placards placed on fence-posts or trees extend the same warning to non-residents.
2. The health officers and physicians in the communities adjacent to the plague districts have been made acquainted with the situation and the recognition of the disease.
3. On account of lack of funds and other administrative restrictions, an active poisoning campaign with strychnin was delayed for four weeks, but is now being actively pursued in the vicinity of schoolhouses and human habitations.
4. There is no need for undue alarm. The situation is receiving proper scientific and administrative attention. Any new developments will be promptly reported.

Hooper Foundation,
Second and Parnassus Avenues.

THE PRESENT STATUS OF EPIDEMIC
POLIOMYELITIS* †

By J. D. DUNSHEE, M. D.
San Francisco

THE trend of epidemic poliomyelitis at the present time indicates that the disease is already epidemic in California, with prospects that its rise during the coming weeks will be inordinately high.

* From the California Department of Public Health.
† See, also, page 428 for other comments.

This prediction is based upon an increased incidence which occurred during the winter and early spring, followed by a sharp increase during April and May. Experience has proved that when a marked increase occurs early in the year, an intensive epidemic occurs during the summer and early fall.

FORMER EPIDEMICS IN CALIFORNIA

Three sharp epidemics of this disease have occurred in California in the past ten years—in 1925, 1927 and 1930. The 1930 outbreak was the most extensive that has ever been experienced in California. There were 1,903 cases reported during that year, with 157 deaths, a mortality rate of 8.25 per cent. In 1927, there were 1,298 reported cases, with 224 deaths, a mortality rate of 17.25 per cent. The 1927 outbreak was characterized by a higher mortality rate than in 1930, but in the 1930 epidemic half again as many cases of the disease were reported. Since January 1, 1934, 176 cases of this disease have been reported. By months they are as follows: January, 25; February, 26; March, 18; April, 36; May (first three weeks), 71.

In the 1927 outbreak, most cases (72.8 per cent) were distributed over the northern part of the state. In the 1930 outbreak half of all cases reported were in Los Angeles, although the increase in San Francisco during that year was very great, as compared with 1927. The first groups of

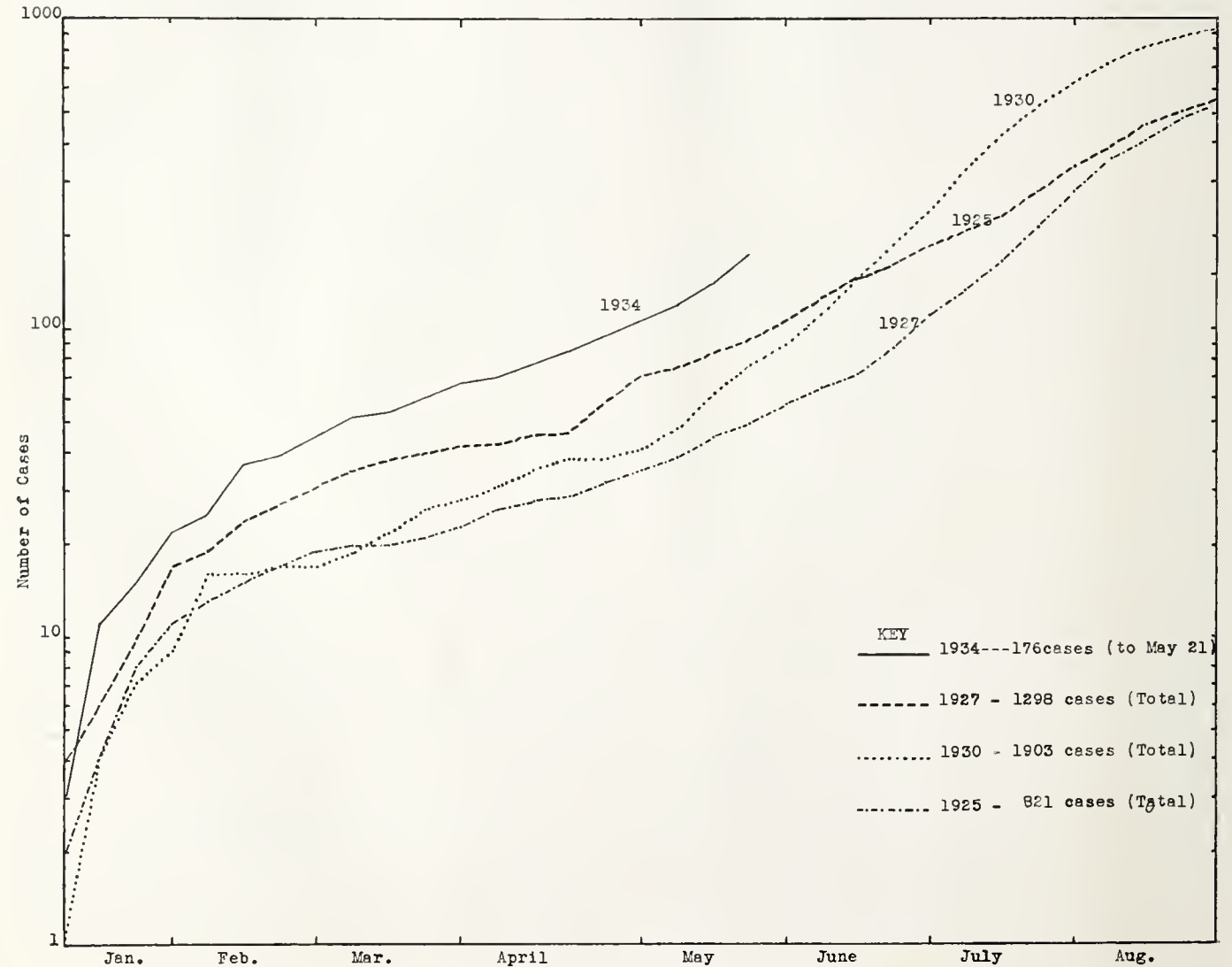


Fig. 1.—Poliomyelitis in California. Cumulative curves comparing 1934 incidence with recent epidemic years.

cases reported this year have occurred in Southern California. In the 1930 outbreak the percentage of cases occurring in individuals between the ages of five and nine years was considerably greater than during preceding years. It would seem, in fact, that there has been a tendency during recent epidemics for more cases to occur among individuals in the higher age groups.

IMPORTANCE OF CAREFUL MEDICAL EXAMINATION

At the present time the occasion calls for careful medical investigation of all cases of illness among individuals of the younger age groups particularly, with strict isolation of all cases that have symptoms suspected to be those of epidemic poliomyelitis. Every child, at this time, who shows typical symptoms of the systemic stage of the disease, such as fever, malaise, headache, pharyngitis, gastro-intestinal symptoms, and infrequent drowsiness, should be regarded as a suspect and should be kept in bed, with complete rest provided. This stage of systemic invasion, when the infection is generalized, may last one or two days, and may be followed by a period of one to four days during which time no symptoms are apparent. In the second stage, that of meningeal irritation, which lasts from one to four days, the symptoms upon which definite diagnosis can be based make their appearance.

VALUE OF REST

The provision of absolute rest, with as little disturbance of the patient as possible, is of the greatest value, both before diagnosis is established and after. Rest should cover a considerable period of time. This is indicated in the fact that there is frequently a lapse, in which no symptoms are apparent, between stages of the disease. It should be borne in mind, also, that any one or two of these stages may be absent or may be so fleeting as to escape attention. If the last stage, the paralytic, does not occur, the case is regarded as one of non-paralytic poliomyelitis. If only the systemic stage occurs, it is called abortive poliomyelitis.

SERUM THERAPY

There is some difference of opinion as to the value of serum in the treatment of the disease. Men in the East regard it as of value in prevention only, while some in the West, with considerable experience, believe they have obtained good results through its use after the disease has developed. Whole blood has also been used with success as a prophylactic. It is given intramuscularly. It is recommended that either whole blood or serum given as a prophylactic be repeated at two-week intervals.

SUMMARY

1. Epidemic poliomyelitis since the first of the year has shown a marked increase, which indicates that an abnormal increase during the summer and early fall will take place.

2. During recent years in California, the disease has shown a slight tendency to occur more

frequently in young adults and older persons than during previous years.

3. In the last California outbreak in 1930, there was a sharp increase in the five to nine-year age group.

4. While opinion relative to the use of blood serum in the treatment of the disease is not entirely unified, its discontinuance at this time is not recommended.

5. The provision of absolute rest, with as little disturbance as possible, is recognized as of great value before diagnosis is established and in all stages of the disease, as well.

State Building, McAllister Street.

COMPULSORY HEALTH INSURANCE*

By FREDERICK L. HOFFMAN, LL.D.
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III

THE agitation for compulsory health insurance rests essentially upon two premises: first, that health insurance will materially improve the health of the wage-earning population; second, that it will substantially reduce the cost of Poor Law relief. Unfortunately, there are no very satisfactory statistics of sickness among the wage earners of England and Wales that would justify definite conclusions. Mortality statistics are insufficient for the purpose, but the only evidence available of what has been achieved during the twenty-one years that the system has been in operation.

DEATH RATES

The crude death rate for England and Wales in 1912, when the system went into operation, was 13.4 per 100,000; in 1932 it was 12, a decline of 1.4. Our American death rate in the registration area in 1912 was 13.9; in 1932 it was 10.9, a decline of 3.0 per 100,000. Hence the health progress in this country, as measured by the death rate, has been more than double the rate achieved in England and Wales. In the words of the author of "This Panel Business," the statistical results of national health insurance have been terribly disappointing. The medical service is largely concerned with trivial complaints, as best shown by the experience in Scotland, for which definite data have been published. According to the Second Annual Report of the Department of Health for Scotland, 1930, "It is obvious that far above all others in numerical importance are the respiratory infections which in the period under review accounted for one-third of the total certificates issued."

MAJOR CAUSES OF MORBIDITY

An analysis is presented of the total cases of sickness assigned to various causes on the basis of 1,000, as follows: tuberculosis 4.6, malignant

*One of a series of articles on compulsory health insurance, written for CALIFORNIA AND WESTERN MEDICINE by the well-known consulting statistician, Frederick L. Hoffman, LL.D. Articles in this series were printed as follows: I, in April issue, page 245; II, in May issue, page 361.

tumors 1.6, anemia 18.6, diseases of the nervous system and special sense organs 43.3, diseases of the circulatory system 22.8, minor diseases of the upper respiratory tract 120, influenza 133, bronchitis 62.5, pneumonia 3.4, other respiratory diseases 25.5, (total respiratory diseases 344.39), gastric and duodenal ulcer 8.6, appendicitis 16.7, hernia 4.5, gastritis 62.9, other diseases of digestive system 25.6, pregnancy and conditions associated therewith 23.7, complications of pregnancy 2.4, diseases of female genitalia 11.2, diseases of kidney 8.8, diseases of bladder and prostate 5.5, other diseases of genito-urinary system 5.1, arthritis 6.9, synovitis 12.9, muscular conditions 54.3, bone conditions 1.8, rheumatism 33.2, rheumatic fever 2.9, cardiac debility 2.5, nervous debility 5.9, debility undefined 4.4, and neurasthenia 5.7. The remainder are of lesser importance.

As observed in the report, "Comparison with causes of death shows that the positions of the various diseases are reversed, and speaking generally, it is true that the killing diseases, cancer, tuberculosis, heart disease, etc., feature much less in sickness incidence, and the numerically more important disabling conditions, such as minor respiratory diseases and rheumatic conditions, are scarcely visible in lists of causes of death."

SOME MORTALITY RATE COMPARISONS

But something may be learned by a comparison of mortality rates. In 1912 deaths from influenza caused a rate of 14.7 per 100,000, increasing to 32.7 in 1932. The rate for pulmonary tuberculosis was 102.2 in 1912, decreasing to 68.7 in 1932. For syphilis the rate was 5.1 in 1912, decreasing to 3.2 in 1932. Cancer of the buccal cavity prevailed at the rate of 6.5 in 1912 and increased to 8.9 in 1932. Cancer of the breast increased from a rate of 10.3 in 1912 to 16.0 in 1932, while cancer of the skin increased from 2.5 to 2.9. Rheumatic fever decreased from 5.4 in 1912 to 2.8 in 1932, while chronic rheumatism increased from 5.2 to 7.9. Diabetes increased from a rate of 11.1 in 1912 to 15.2 in 1932. Anemia increased from 5.6 to 7.2, leukemia from 2.0 to 3.2, and heart diseases from 140.2 to 255.8. Fatty heart decreased from 8.7 to 6.8, bronchitis from 108.9 to 50.6, pneumonia from 102.4 to 73.5, pleurisy from 4.0 to 2.4, and asthma from 4.5 to 4.2. Ulcer of the stomach increased from 6.8 to 9.9, appendicitis from 6.5 to 7.5, hernia from 10.8 to 12.0. Cirrhosis of the liver decreased from 10.4 to 3.6. Biliary calculi increased from 2.2 to 3.0, and diseases of the pancreas from 0.4 to 1.3. Chronic nephritis decreased from 34.8 to 33.1, and diseases of the bladder from 3.1 to 2.3. Diseases of the prostate increased from 7.8 to 22.4.

COMMENT

Here, then, is evidence that many of the principal diseases which should be affected by health insurance show an increase rather than a decrease.

The decrease observed is the direct result of public health activities on a colossal scale, which for thoroughness and efficiency stand second to none in comparison with other countries the world over.

MOREIDITY STATISTICS AND SICKNESS, AND DISABLEMENT BENEFITS AND CLAIMS

Quoting again from "This Panel Business": "As a matter of fact, the Insurance Acts Committee, in attempting to explain the ever-increasing number of sickness claims under national health insurance, actually submitted just the reverse point, namely, that there was no direct correspondence between the death rate and the incapacitating sickness rate, and that an increase in the recorded sickness treatment may well be associated with, and indeed to some extent be the cause of, a falling death rate." And that therefore, "a much more likely explanation of the latter is, of course, the improved sanitation in this country." And furthermore: "It was shown in the report of the investigations published in 1931, that there had been, in fact, a rise in claims for sickness and disablement benefit so continuous in its operation, and of such magnitude, as to occasion grave concern among all engaged in the administration of these benefits. Statistics showed that between 1921 and 1927, the percentage increase in the total number of weeks covered by claims to sickness and disablement benefit was as follows:

"Sickness Benefit.—This commences on the fourth day of incapacity, and may be paid for a total of twenty-six weeks.

"The claims of men had risen by 41 per cent.

"The claims of unmarried women had risen by 60 per cent.

"The claims of married women had risen by 106 per cent.

"Disablement Benefit.—This benefit takes the form of a continuance of weekly payments if the incapacity is prolonged after the twenty-six weeks of sickness benefit.

"The claims of men had risen by 85 per cent.

"The claims of unmarried women had risen by 98 per cent.

"The claims of married women had risen by 159 per cent."

Subsequent investigations showed that though the claims had fluctuated since 1927, there had been no substantial improvement since that year. The average per capita benefit paid has increased from 10.49 shillings in 1920 to 20.06 shillings in 1928. The per capita cost of drugs has increased from 2 shillings 2¼ pence in 1921 to 3 shillings 2½ pence in 1927. Hence, it is said, "The evidence is conclusive. It shows the absolute failure of compulsory health insurance to reduce the amount of sickness among the workers of this country. Indeed, according to the figures it has

roughly doubled itself in the last decade. This is not all. The figures are not improving, in spite of the publicity given to them. Since 1927 the cost of medicines and appliances had increased by more than another half a million pounds." And, "In no sort of way was it possible to show a decrease in amount of illness among the insured population."

THE COSTS OF THE SYSTEM

Summarizing the total cost of the system it appears that from 1912 to 1932 the total contributions have amounted to 586,261,000 pounds, or about \$2,931,305,000; the total cost of administration, 76,145,000 pounds or about \$380,725,000; the expenditures for sickness benefits, 143,275,000 pounds or about \$716,375,000; disablement 61,142,000 pounds or about \$305,710,000; maternity benefits, 25,755,000 pounds or about \$128,775,000; medical benefits, 137,465,000 pounds or about \$687,325,000; other benefits, 27,134,000 pounds or about \$135,670,000; making the total benefits 394,771,000 pounds or about \$1,773,855,000.

The huge amounts paid for maternity benefits have apparently not materially affected the death rate from puerperal diseases. In 1922 the death rate for diseases of pregnancy, childbirth and the puerperal state combined was 38.1 per 100,000, increasing to 40.4 in 1932. For puerperal sepsis alone the death rate increased from 13.9 per 100,000 in 1922 to 15.5 in 1932, with the figure as high as 18.4 in 1930. The death rate for ectopic gestation was 1.1 per 100,000 in 1922, increasing to 1.3 in 1932. The rate for puerperal hemorrhage shows a slight decline from 5.0 in 1922 to 4.5 in 1932. Puerperal albuminuria declined from 7.1 in 1922 to 5.8 in 1932. The rate for other toxemias of pregnancy increased from 0.5 to 2.4. Without enlarging upon this aspect of the problem, it is sufficient to point out that the maternal health of Great Britain has not improved materially during the last ten years, regardless of the huge amounts spent by the national health insurance for maternity benefits.

COINCIDENT POOR RELIEF COSTS

Going now to the question of poor relief, the situation is complicated by a number of years of industrial distress which make exact comparison of conditions extremely difficult. The cost of outdoor relief in England and Wales—according to the report of the Ministry of Health for 1932—changed from 5,793,383 pounds in 1921 to 15,167,000 in 1933. During the last three years, the cost of outdoor relief has increased from 11,611,006 pounds in 1931 to 12,406,600 in 1932, and, as stated before, to 15,167,000 in 1933. In other words, the anticipated health benefits have not been realized in compulsory health insurance, nor has the anticipated reduction in poor law expenditures materialized.

(To be continued)

THE LURE OF MEDICAL HISTORY*

SOME MEDICAL OBSERVATIONS IN THE PACIFIC ISLANDS AND DUTCH EAST INDIES†

By ALBERT E. LARSEN, M. D.
San Francisco

THE information in this article was gathered while making a leisurely trip around the world on a sailing yacht. This method of travel offered an unusual opportunity to see conditions in many of the more remote sections of the Pacific, and afforded as well, time to spend in the more developed places without the worry of steamship connections.

THE MARQUESAS ISLANDS

After a 3,000-mile sail from San Francisco, the Marquesas Islands are reached. The status of the population of these islands presents a striking example of the effect of the contamination of a primitive, isolated civilization by the white race. Herman Melville, early in the nineteenth century, described the Marquesans as the most physically beautiful of their race in existence. They were reputed to be the most warlike and feared people in the Pacific. Their islands were densely populated and contained an abundance of natural resources. They were practically free from any serious disease when first visited. When Jack London beheld Typee Valley, once the most densely populated of all, he wrote of being "lulled to sleep by the cough of a dying race." Today the valley is practically uninhabited.

The great cause of death was tuberculosis. The disease struck these susceptible people with all its virulence. Fine healthy individuals would be suddenly stricken and seldom recovered. It is now about 150 years since the first whalers put in at Nuka Hiva. There are still some Marquesans remaining. Although tuberculosis is today quite prevalent, it does not cause death so rapidly. There are now many chronic cases. Many of these could become arrested with proper medical treatment, but it is practically impossible to keep a native in bed for more than a few days. The presence of so many carriers has naturally increased the amount of exposure to children and non-infected people; yet the statistics show that the population during the past few years has been increasing at the rate of about twenty per thousand. There are several factors which may be responsible for this. There has been a great intermixture of white blood, so much so, that it is now hard to find a pure-blooded Marquesan. It is possible that during the 150 years the race has

* A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of CALIFORNIA AND WESTERN MEDICINE. The column is one of the regular features of the Miscellany Department of CALIFORNIA AND WESTERN MEDICINE, and its page number will be found in the front cover index.

† From the Pacific Institute of Tropical Medicine within the Hooper Foundation of the University of California.



Fig. 1.—Frambesia—Solomon Islands.



Fig. 2.—Tinea Imbricata — Solomon Islands.



Fig. 3.—Bushmen of the New Hebrides. The pot bellies of the children are caused by large spleens due to malaria.

finally acquired a degree of immunity to tuberculosis. During the past eight or nine years there has been careful medical supervision. Childbirth is handled better, and some consideration is given to the care of infants.

Debilitating diseases such as lues are treated. These factors may be responsible for the slow revival of a once almost extinct race.

LOW ARCHIPELAGO ISLANDS

A few hundred miles from the Marquesas lie the islands of the Low Archipelago. These are coral islands, with a narrow thread of land enclosing beautiful lagoons. There is very little soil and only the cocoanut will grow naturally. The inhabitants have taken to the sea for a livelihood. The population is small, as only the hardiest can survive. They have become expert boatmen and fishermen. The pearl-diving industry has supplied them with the opportunity for considerable monetary income. The people have become skilled divers. The technique of descending, bare-skinned, to great depths, shows how experience can lead to the development and utilization of physiological principles. Diving is done at an average depth of 60 feet. Some of the best divers may work constantly at over 100 feet. The diver hangs onto the side of the canoe and breathes deeply many times, exhaling slowly while singing or whistling. After a last full and rapid inspiration, he descends to the bottom with the aid of a weight. As he goes down he holds the nose and forces air into the pharynx and nares. This, of course, equalizes the internal and external pressures on the ear-drum. He stays on the bottom for about two minutes and then swims up. As he ascends, he clicks his ear-drums to again equalize the pressure. Unless this is done correctly, a severe headache results. The divers descend every ten or fifteen minutes from dawn until early afternoon. It is said that the average

life of a diver is about ten or fifteen years. This shows in the population, as very few elderly men are to be seen. The few that were still living when the writer visited the Archipelago were obviously dying of cardiovascular disease complicated by emphysema.

FRENCH OCEANIA

Farther south, at Tahiti, is the center for medical activities of French Oceania. From here roving physicians, traveling by means of trading schooners, visit most of the important outlying islands. A physician has to hunt disease, as it is seldom that a native will consult him voluntarily. His chief interest is the discovery of syphilis and leprosy. In this way, several hundred lepers have been gathered at the leper colony on the island of Tahiti. It is quite a problem to transport a case from a distant island, for there is still native superstition and dread of the disease. In one instance it caused a leprous girl to be transported in an open boat, towed behind a schooner, for several hundred miles. The leper colony is located in a beautiful canyon. Only symptomatic treatment is given.

Venereal disease is very prevalent. Practically all the town girls are *dangerieux*. They appear at the out-patient clinic only when there is some outward manifestation of the disease. As soon as this has been cleared, they will not return for further treatment. On some islands gonorrhea affects the large majority of inhabitants. The disease is mild among the natives. They seldom seek treatment. It is said that the male seldom develops stricture and that salpingitis in the female is very rare.

COOK ISLANDS

As one progresses farther west, the disease picture begins to change. At the Cook Islands, yaws appears sporadically and syphilis is not so

common. When Samoa is reached, syphilis has completely disappeared and yaws becomes the most prevalent disease. There is here much discussion of the relation of the two spirochaetal diseases. The physicians at Pago Pago believe that an attack of yaws must produce some immunity to syphilis. Lambert at Suva is quoted as saying that, "I have never found a physician in the South Pacific who has seen a chancre or the scar of one on a Pacific Islander." There is also discussion as to the best method of the control of yaws. One group advocates complete eradication by systematic treatment and isolation. Another believes that the most practical method is to allow natural infection and then treat. This latter method would allow an immunity to be developed and prevent the appearance of syphilis.

AMERICAN SAMOA

American Samoa, under the efficient administration of the Navy Department, has developed one of the finest medical services in the South Pacific. There is a modern hospital at Pago Pago with health centers scattered in the outlying districts. The inhabitants are examined at regular intervals, and a record is kept of the disease history and examination of each individual. This latter work will eventually provide material for considerable statistical deductions. To date it has shown that filariasis requires a long exposure before a person becomes infected. After infection it will take several years for elephantiasis to appear. The visitor to Samoa is struck by the frequency of complete or partial blindness. There is a native custom for the removal of foreign bodies in the eye which was largely responsible for this. It has been the practice to have someone spit in the eye in the attempt to wash out any material. If their eyes subsequently became inflamed the irritating sap of a tree was instilled. If an ulcer developed, it was scraped with the sharp edge of a coconut palm, or even sand was rubbed in. The natives have been taught to avoid these harmful procedures, and to ask for medical attention, with the result that blindness is becoming less and less frequent. American Samoa, by rigid quarantine,



Fig. 4.—Oil of *Chenopodium* being administered to large groups. Djokjakarta, Java.



Fig. 5.—Pasteur Institute, Bandoeng, Java.

was one of the few places in the world to escape the first shock of the great pandemic of influenza in 1918. This disease struck most of the islands of the Pacific like a thunderbolt. A mortality of from 10 to 20 per cent was left in its wake. In 1928, when the disease finally made its appearance in Samoa, it was mild. Though one-fourth of the population was affected, there were very few deaths. British Samoa has the same problems, except that dengue fever is more prevalent, and occasionally appears in epidemic form and disables a large proportion of the white population. The natives seem immune. During the depression years much of the good work done by medical supervision was destroyed by the lack of funds and political unrest. As elsewhere, under these conditions, medical work is the first to suffer. The natives refuse to seek medical aid and there is a general disregard for sanitation laws. As a result, diseases such as yaws and typhoid, which had been controlled with great difficulty, reappeared in alarming frequency.

FIJI ISLANDS

The index of diseases again changes when travel is continued to the Fijis. Here the great problem has been the yearly epidemic of bacillary dysentery. Each year in the wet season the medical authorities can expect an epidemic of varying severity. Tropical conditions and lack of funds for public-health work make it practically impossible to prevent such outbreaks. This disease was probably brought to the Fijis by labor imported from India. The medical authorities live in constant fear of the possible introduction of cholera through this source. Rigid quarantine laws have been developed to prevent such a visitation.

Suva is the center for medical activities of the New Hebrides, Solomon, Gilbert and Ellis, British Samoa, and the Tonga groups. About forty years ago a medical school was established which has recently been supported by the Rockefeller Foundation. It is probably one of the most unusual schools of its kind in the world. The student body is composed of dark, savage-looking Solomon Islanders, giant crinkly-haired Fijians, handsome straight-haired Samoans, and typical Polynesians from the Gilbert and Ellis islands. Most of

these are sons of chiefs. The entrance requirements are the ability to read and write English, and a knowledge of arithmetic. After a four-year course the student becomes qualified as a native practitioner and returns to his own island to practice. He has learned enough to diagnose and treat the more common conditions, and is highly successful in bridging the gap between native and European medicine.

NEW HEBRIDES

In passing from the Fijis to the New Hebrides, health conditions and the disease index again change with striking suddenness. Malaria, the scourge of the tropical world, makes its first appearance. It is remarkable, when one considers the probable free intermingling of Pacific Islanders in the past, along with the probable path of racial migration, that this disease did not work its way farther east. The whole situation is dependent on the presence of the *Anopheles* mosquito, which to date has not been able to work its way across the two hundred miles of ocean which separates the Fijis from the New Hebrides. It is interesting to contemplate how this disease would have affected the idyllic islands farther east. They doubtless would have been transformed into very inhospitable places.

Conditions in the New Hebrides are quite primitive. The natives of these islands are savage and still cannibalistic. Malaria, yaws, hookworm, and *tinea imbricata* are rampant. Blackwater fever is common. Except in the small settlements, there are few whites. Most of these have been riddled with malaria. Many young adventurers, lured by the tales of the South Sea Islands, have tried to meet the ordeal. Many have succumbed or must leave after a short stay. Others, with pallid faces and bloodless lips, may be seen paying the price of acclimatization.

SOLOMON ISLANDS AND NEW GUINEA

The Solomon Islands and the Great Island of New Guinea are also still quite primitive. The mining of gold in New Guinea is done under great difficulties. Aeroplanes are used to transport labor and equipment over the impenetrable jungles, but malaria meets them at the site of the mine. There has been a great loss of life. To exploit successfully the valuable mineral resources, the future miner will have to have a Gorgas to pave the way for drills and shovels. Along the east coast of New Guinea, in the D'Entrecasteaux and Trobriand Islands, venereal granuloma is very prevalent. All found to be infected are isolated on a small island near Samarai. Here one may see the complete clinical picture of the disease from the small papule or vesical on the penis or labia minora to extensive skin ulcerations of the groin and thigh. It is treated successfully with antimony, but often leaves deforming cicatrices which require surgical correction.

Doctor Strong, Commanding Medical Officer of British New Guinea, at Port Moresby, has been in the tropics for many years and has made some

interesting observations. He has noticed that the incidence of eye disease is high among the natives. He believes that its prevalence is due to the lack of vitamin A in the diet, and he has successfully treated large numbers with cod-liver oil. The people living on the coast who are fishermen have a much smaller incidence of the disease. He has also explained the fact of larger families, and the lesser susceptibility of the coastal people to tuberculosis, on the basis of diet difference.

DUTCH EAST INDIES

The Dutch East Indies, farther west, provide an example of the effect of a continuous warfare against the minute enemies of man. This has been so successful that it is now possible for many Europeans to live and work with impunity practically on the equator. The Dutch have developed their possessions into one of the most productive of tropical countries. To do this they have had to evolve an efficient medical service. Large modern hospitals have been built. A fine example of this is the Government Hospital at Weltevreden. It has a capacity of over one thousand beds. Lesser hospitals are scattered through the islands at strategic points, and all are completely equipped and can be ranked as Class A.

The common diseases requiring hospitalization are malaria, tuberculosis, beriberi, typhoid fever, smallpox, trachoma, ankylostomiasis, and ulcerative colitis. Another common disease is cirrhosis of the liver. It is usually the Lennec type. An interesting fact in the etiology is that none of these people are addicted to alcohol. The theory is that the use of strong cayenne peppers and the prevalence of low-grade intestinal infections are responsible. Along with this is the fact that primary cancer of the liver is the most common abdominal malignancy. An out-patient clinic is connected with each hospital. These are well attended, as the native has learned to have confidence in the yellow medicine in the hypodermic syringe. They seek its use for all conditions, and believe that it will cure anything. They not only know its curative powers, but also ascribe an increased sexual power to its administration.

The skin clinic has the greatest number of visits. Yaws is the most common condition seen. In one morning one may see all of its manifestations from the initial papule to sabre shins. Though yaws is prevalent, syphilis flourishes. Most Dutch physicians, however, believe that there is very little relation between the two. Unlike Lambert's experience in the South Pacific, they will cite numerous instances of a primary chancre on the penis in the presence of tertiary manifestations of yaws. An interesting clinical point of differentiation in a late case is that a weakly positive Wassermann reaction indicates syphilis, whereas a strongly positive reaction suggests yaws. The Wassermann reaction in yaws is not affected by treatment.

JAVA

Leprosy is quite common in Java. Patients are not isolated as in other parts of the world. They

regularly visit an out-patient clinic where the chaulmoogra derivatives are given by mouth. The Dutch believe this method gives as good results as the injection method. As in other parts of the tropical world, acute appendicitis in the native is extremely rare. Peptic ulcer is also uncommon. Cerebrospinal and arterial manifestations of syphilis are seldom seen except in the Chinese and the white race.

Public health problems assume magnified importance in a tropical country. Epidemiological problems are centered in the Pasteur Institute at Bandoeng, Java. Bubonic plague made its appearance in Java in 1911. The inland villages seem to be the endemic centers, while the seaports are said to be free. The wave of plague started in eastern Java and has worked two-thirds across the island. An intensive campaign against its spread is going on constantly. The line of progression has been established, and along this front rodents are exterminated and dwellings rat-proofed. At the Pasteur Institute flea counts and pathological examinations are made on all rodents caught. There has been no great epidemic in recent years, but the evidence shows that the country is still infected. Haffkin's serum has been given a trial without apparent success.

MALAY ARCHIPELAGO

The malaria problem is handled by stations scattered through the Archipelago. Malaysians have been trained in the recognition of different types of mosquitoes as well as in the recognition of different types of malaria from blood smears. They have become very adept in this work. They travel about the islands collecting specimens of water. Any larvae are allowed to develop and the type of mosquito identified. Anopheles districts are charted and an attempt made to clean them up. During the wet season bacillary dysentery occasionally appears. Amebiasis is common all the year round. A public-health problem of considerable importance is the annual exodus and return of large numbers of inhabitants of Mahommedan faith during the Mecca season.

Aside from actual medical control there is intensive propaganda designed to teach the natives coöperation in public-health measures. The work was started by Doctor Hydrick of the Rockefeller Foundation and has developed into a far-reaching organization. Native speakers visit every village and talk to groups informally. Moving pictures about yaws, hookworm, plague, etc., produced in a simple, understandable way, have been shown to large audiences. The work has been very successful.

IN CONCLUSION

The region described in this paper is seldom thought of by physicians in America. There is a great deal of excellent work being done, especially in Java, which has been overlooked. The islands of the Pacific are somewhat backward in scientific medicine, but they provide ideal conditions for the observation of many diseases.

1124 Russ Building.

CLINICAL NOTES AND CASE REPORTS

UNUSUAL EMBRYONAL DEVELOPMENT ERROR

By E. L. MEYERS, M. D.
Chico

IN reading the report in the January 1934 *CALIFORNIA AND WESTERN MEDICINE* by W. A. Shaw of Reno, the thought suggested itself that I report the following case: The child, D. L., was delivered on November 12, 1931. The mother was a primipara. The presentation was that of a breech, with a very difficult and strenuous delivery. When the feet and legs were delivered through the manipulations, I had first thought that I had injured the right leg of the child, as the femur appeared to be a malposition, and there was also a tremendous amount of shortening, as if it might have been a fracture.

REPORT OF CASE

The weight of the child was 9½ pounds, and it measured 20 inches in length. The mother's age was twenty-three years; the father's, twenty-seven. They



Fig. 1.—Anteroposterior photograph, taken January 22, 1934.



Fig. 2.—X-ray taken at birth.

were perfectly normal, history was negative as to lues and any former malformations in the family. The child was taken to the Enloe Hospital of Chico the same day and x-rayed. The x-ray plate you will find enclosed, showing a very perfect femur for the left side, and very little, if any, development at all of the femur on the right side.

At the present date, this child is two years two months of age; its weight is twenty-eight pounds; its height is 33 inches. Measurements are as follows:

Arm lengths from spine to tips of fingers: left $27\frac{1}{2}$ inches; right, $27\frac{1}{2}$ inches.

Chest circumference, 20 inches.

The right biceps, 7 inches.

Right forearm, 7 inches.

Circumference of left biceps, 7 inches.

Circumference of left forearm, 7 inches.

Abdomen, 19 inches in circumference.

Length of the spine, $17\frac{1}{2}$ inches.

Distance between the anterior superior spine of the iliac, 6 inches.

Circumference of the hips, 20 inches.

Left leg length, 17 inches.

Right leg length, 10 inches.

Left upper leg length, $8\frac{1}{2}$ inches.

Left lower leg length, $8\frac{1}{2}$ inches.

Circumference of the left thigh, $11\frac{1}{2}$ inches.

Circumference of the lower leg, $7\frac{1}{2}$ inches.

Right upper leg length, 3 inches.

Lower leg length, 7 inches.

Circumference of the thigh, 11 inches.

Circumference of the lower leg, 7 inches.

In addition to the malformation in the femur itself, this child has a marked talipes valgus of the right foot.

The second or latest x-ray of this individual was taken again at the Enloe Hospital on January 22, 1934, and the plate accompanies this case report, showing a perfect femur of the left leg, and, as my reading would be of the picture, a complete absence of the upper end of the femur of the right leg; the acetabulum on the right side being somewhat filled, and the position of the upper femur a little bit high, or approaching a congenital dislocation.



Fig. 3.—Second x-ray, taken January 22, 1934.

COMMENT

I shall not enter into the discussion as to the cause of this condition, or as to the future treatment of this child, but would appreciate anyone who reads this case report furnishing any information which would be valuable to myself, or to this child and its future.

Waterland-Breslauer Building.

Guiding Principles in Biliary Surgery.—Federoff states that the mortality after operations on the biliary tracts, as based on large statistics, amounts to 9 per cent. The mortality of conservatively treated patients having gall-stone disease, based on the universal literature, amounts to 15 per cent. Operations performed during the acute stage carry a mortality twice as great as that attending on operations performed in the interval. The demand for an immediate operation, as in acute appendicitis, is not justified, because the operation is more serious. Operations during an attack should not be performed except for an urgent indication. Mortality in younger patients, up to the age of forty years, and of those operated on in the interval, amounts to 1 or 2 per cent. Icterus is the gravest complication. Blood transfusion, next to dextrose insulin, proved to be the most valuable preoperative measure in jaundiced patients. Primary closure of the abdomen is permissible only when complete peritonealization of the liver bed, of the stump of the cystic duct and of the suture line of the common bile duct is possible, and when the papilla of Vater is patent. Kehr's T drainage tube is best adapted for the drainage of the choledochus. Operations for biliary fistulae are difficult and uncertain. The author finds the method of extra-abdominal rubber tube prosthesis between the fistula and the intestine most satisfactory. Anastomosis between the gall-bladder and the stomach or the duodenum is indicated only in stenosis of the choledochus or of the papilla and in cancer, but not in so-called stasis of the gall-bladder. The cause of recurrent pain is seen in particular irritability of the vegetative nervous system. — *Deutsche Zeitschrift für Chirurgie.*

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

HYPERTENSION

WHAT CONSTITUTES HYPERTENSION

J. MARION READ, M. D. (490 Post Street, San Francisco).—How high must the arterial tension be before it becomes hypertension—140, 160, or 200? Even though we are discussing a quantitative increase in blood pressure, we cannot define hypertension by saying that all pressures exceeding a certain arbitrary limit are true hypertension. The subject is not so simple as that. For example, there is diastolic as well as systolic pressure to be taken into account.

Another point to consider is that hypertension is not a disease entity. We cannot name it on a certificate as a cause of death. Like leukopenia, hyperglycemia, achlorhydria, etc., it was non-existent as a clinical concept until the technical means of measuring the deviation from an accepted norm was developed. Is it, therefore, entitled to the prominence it occupies in the minds of medical men? Would it occupy so prominent a place if it were not for the witchery of figures—and the feeling of power imparted by ability to measure a physiologic function and express it in numbers; an ability which in this, and many other instances in medicine, far outstrips our ability to interpret correctly the meaning of the figures after obtaining them?

The light in which hypertension is viewed today is analogous to that in which fever was regarded a century ago. We speak of hypertension in much the same manner that our predecessors discussed "the fever." Introduction of the clinical thermometer, about 1850, enabled Wunderlich, after eighteen years, to distinguish between various kinds of fever in his book "Medical Thermometry." The subject of arterial tension is more complicated than that of fever, and it has required twenty-five years of clinical sphygmomanometry before necessary distinctions have come to be recognized, and can be discussed as "bedside medicine."

In making some of the necessary distinctions, it is convenient to recall that, functionally and anatomically, the circulatory system consists of three parts—the heart, or motive force; the aorta and great vessels, or reservoir; and the arterioles, capillaries and veins, or distributing system. In discussing hypertension, it is convenient to keep these three divisions always in mind. In performing its function of maintaining an adequate blood supply, the circulatory system must frequently overcome handicaps interposed by disease in one of its three parts, or in other organs of the body. To accomplish this, an elevation of pressure is often the only mechanism available. Just as one view of fever regards it as a normal, beneficial response to infection, so we may also regard in-

creased arterial tension as a physiologic response to disease somewhere in the body.

Whatever theory one may hold regarding hypertension, recent studies upon blood flow and the mechanics of the circulation make it necessary to revise some popular notions upon the subject. The manner in which our technical ability to measure arterial tension has been developed seems partially responsible for some of the misconception which has frequently marked discussions of hypertension in the past. I refer specifically to the fact that during its first decade clinical sphygmomanometry concerned itself solely with the systolic pressure. This point was emphasized and discussed in detail in this column over five years ago.* It is only necessary now to recall briefly that the diastolic pressure measures peripheral resistance and determines the pulse pressure necessary to maintain an adequate supply of blood for tissue nourishment; the magnitude of the pulse pressure being usually about half that of the diastolic pressure. Systolic pressure has no physiologic significance, being merely the sum of diastolic and pulse pressure. Since only that portion of the heart's contractile force exerted after the aortic valve is opened (*i. e.*, pulse pressure) is effective in propelling the blood through the vascular system, the body seems to employ various available mechanisms to maintain an adequate pulse pressure.

In defining and classifying hypertension, it is necessary to consider whether both diastolic and systolic pressures are raised, or if the systolic alone is elevated. A high diastolic pressure without a proportionately high systolic pressure is rare except in myocardial failure, although a low or normal diastolic pressure with elevated systolic pressure is frequently encountered.

It would clarify our understanding if the term "hypertension" were used only in referring to high diastolic pressure, since elevated systolic pressure occurs in various physiologic states simply as a result of increased pulse pressure, and in pathologic states where wide pulse pressures are compensatory. A brief discussion of one physiologic state, and of the pathologic conditions in which elevation of pressure is a compensatory mechanism adopted to enable the circulatory system to maintain an adequate blood supply, should serve to illustrate and assist in arriving at what we mean when we speak of hypertension.

First Type.—There is a group of conditions, all marked by normal or low diastolic pressures with wide pulse pressures and consequent high systolic pressures.

The normal condition of exercise is one of them.

* Read, J. Marion: Adequate Arterial Pressure, "Bedside Medicine," Calif. and West. Med., 29:102, 1928.

Another is thyrotoxicosis, in which persistent circulatory adaptations resemble those which are temporary in exercise, namely, fast pulse and wide pulse pressure, both responses to demands for increased blood flow.

The circulatory adaptations in both exercise and thyrotoxicosis resemble the response to injections of epinephrin, the secretion of which within the body perhaps accounts for the elevated systolic pressure seen in excitement, as upon a nervous patient's first visit to the doctor, or when being examined for life insurance.

Once in a long time a physician sees one of those rare cases of compensated, complete heart-block with very slow pulse and very wide pulse pressure, indicating increased systolic output. Only by this compensatory arrangement can such an individual maintain an adequate circulation.

Aortic insufficiency might be considered here, although the wide pulse pressure usually results from lowering the diastolic rather than elevating the systolic pressure.

There is another condition in this class which might be regarded as a special form of hypertension, since the lesion which causes it is in the arteries. I refer to the normal diastolic and high systolic pressures one frequently observes in individuals past middle life, often without symptoms or other evidence of serious cardiovascular disease. The aortic second sound is sharp and ringing, the brachials are tortuous, and there is other evidence of large-vessel sclerosis; the roentgen-ray reveals an elongated aorta, occasionally even calcified plaques, and at autopsy the aorta and great vessels are found to be sclerotic and rigid. Replacement of elastic tissue in the aorta, whose recoil normally forces blood onward during diastole, has resulted in a compensatory mechanism resembling that in aortic insufficiency. The pathologic lesion in both aortic sclerosis and aortic insufficiency render it impossible for a portion of the heart's kinetic force exerted during systole to be stored in the distended aorta as potential energy to be released by elastic recoil during diastole. Loss of this function, which is important in the normal circulatory system, is met by widening the pulse pressure and accomplishing all of the onward propulsion of blood during systole.

These examples will serve to illustrate conditions which have been called hypertension because of their elevated systolic pressure, but which logically do not belong in this category, unless one wishes to regard aortic rigidity and its necessary accompaniment of elevated systolic pressure as one form of hypertension.

Second Type.—Use of the term "hypertension," it seems to me, should be reserved for those cases in which the diastolic pressure is persistently high. This condition results when the peripheral resistance is raised by narrowing of the lumen in the smaller arteries and particularly in the arterioles. Nor does it seem necessary for the arterioles of the whole body to become diseased; a fibrosis of the small vessels of one organ seems sufficient to produce an elevation of diastolic, with the necessary widening of pulse pressure, such as one encounters in glomerular nephritis. The same

adaptations of blood pressure have been thought to occur in fibrosis of the basilar vessels supplying vital centers in the brain stem. In eclampsia, increased intracranial pressure and other disease states, the same blood pressure reactions occur, but it only clouds the issue to speak of them as hypertension.

This leaves only the condition known as essential hypertension—which term recalls "the idiopathic fevers" of a half-century ago. Here the lesion seems to be primary in the arterioles themselves, increasing peripheral resistance and inducing the usual vascular response—elevation of pressure to overcome the resistance. What causes the arteriolar disease and increased peripheral resistance? Is it prolonged vascular spasm which eventuates in permanent reduction of the lumen? Or is the vessel wall damaged by a toxin of infectious or metabolic origin? Whatever the etiology, this condition, in the present state of our knowledge, would come closest to being true hypertension.

Summary.—1. There are numerous conditions in which elevation of blood pressure, usually the systolic pressure, is a feature. This increase of pressure is usually compensatory, or purposeful and often only temporary, and should not be called hypertension.

2. There is a type of hypertension marked by normal or slightly elevated diastolic pressure, but wide pulse pressure with resultant high systolic pressure. This occurs in elderly persons when the normally elastic aorta and great vessels become sclerotic and rigid.

3. Another type of hypertension is marked by high diastolic and systolic pressures, indicating increased peripheral resistance. This occurs in younger persons in whom the arterioles are severely damaged in a disease process of unknown etiology.

* * *

PROGNOSIS

D. SCHUYLER PULFORD, M. D. (California State Life Building, Sacramento).—Two fundamental principles underlying hypertension should be kept in mind in a discussion of prognosis—(1) heredity, (2) type of hypertension.

1. *Heredity.*—In cases of similar type, one need not consult a cardiorenal specialist to prognosticate the fate of a hypertensive, though they die cardiorenal-vascular deaths. With high blood pressure patients the following dictum holds: "I would like to know more and more about what kind of a patient has a disease than about what kind of a disease the patient has." So it is with hypertension. Other things being equal, each type of hypertensive disease kills its bearer more or less according to what was written in the heredity book by the gens of his or her parents, and grandparents. Whether this be a tendency to obesity, endocrine imbalance, subnormal arterial system or unstable vasomotor mechanism, or a deficiency disease or what not, nevertheless a study of one's forebears shows that mendelian unit characters play an important rôle in hypertension even as in cancer, color, and creed.

2. *Types of Hypertension.*—Hypertension, like epilepsy, is a symptom, not a disease, and is due to many conditions, some known and others unknown. When these conditions are unknown, it is called “primary” or “essential,” and when known, “secondary hypertension.”

Longevity of a hypertension patient depends a great deal upon its type. A convenient classification is as follows:

- Type 1. Primary hypertension (essential; idiopathic).
 - (a) Malignant (Fahr).
 - (b) Benign.
- Type 2. Secondary hypertension.
 - (a) Fluctuating or intermittent: Seen in emotional states of fear, anxiety, worry, or in women at the menopause.
 - (b) Chronic: Occurring in such diseases as glomerulonephritis, urinary obstruction, toxemia of pregnancy, hyperthyroidism, aortic insufficiency.

Type 1. *Primary Hypertension.* — (a) Malignant Primary or Essential Hypertension: This usually comes on in early life, but may occur in the years over fifty. It invariably leads to rapid death from cardiac or renal failure, or both. Less often are there vascular accidents, as the vascular tree is not primarily faulty. No treatment seems to stay the tide of onrushing dissolution. Cardiac hypertrophy is extreme in the milder types and uremia is rapidly fatal in the more fulminating types. In this group come the early deaths, say from thirty to forty years of age, with a duration of symptoms at times of only a few months. A study of the eyegrounds shows papillo-edema, a neuroretinitis with sclerosis of the small retinal arterioles. This eyeground finding is a bad prognostic sign in hypertension. This often antedates uremic symptoms with which the patients die who develop a nephrosclerosis of high degree. Hyperemia of the optic disks and sclerosis of the smaller retinal arteries are seldom seen, or are only slight, in primary arteriosclerotic Bright’s disease or glomerulonephritis.

(b) Benign Essential or Idiopathic Hypertension: This is an entirely different affair. Rest, restricted activity of mind and body, sedatives, specific depressor medicines and diet control the blood pressure’s level, and these patients may, and often do, live out their normal life span, especially if they have inherited a fairly good cardiovascular system.

Renal risks of death are less apt than cardiac or vascular. In this group occur continued very high blood pressures which persist up to the sixth and seventh decades, or later with enormous hypertrophy of heart and normally thickened blood vessels.

Asymptomatic optimum blood pressure levels as high as 230/130 are often encountered with a history of carrying this pressure for years. The disease may persist for years without any important symptom and only be discovered during a routine physical examination such as examination for insurance. It is in this group that coronary narrowing often occurs, and it should be emphasized that inexpedient radical reduction of blood pressure by drugs is like “paving hell with good intentions.”

In the essential hypertension group we have a cardiovascular hypertrophic change, and not a senile degenerative change with its tendency to cerebral hemorrhage and coronary infarction. If a short stay in the house “Casa Mana” and vasodilutants proves the power of arterial relaxation is still present, the prognosis is good. Transient or permanent paralysis is due to cerebral arterial thrombosis and does not often kill, and cerebral hemorrhage seldom takes place with diastolic blood pressures under 115. Death is usually at a late age from cardiac decompensation or intercurrent infections. The necessary adequate intra-aortic pressure being reduced allows coronary thrombosis or an ischemic myocardium and the reduced intercerebral pressure, cerebral thrombosis or anemia, none of which is apt to occur if the pressure is left comfortably high.

Even when hypertension cases are typed according to the above rather arbitrary classification there is a wide variation in individual longevity, so that perhaps we have in primary hypertension only one fundamental entity differing only in its speed of anatomic change and in the organ most attacked. Calling the difference heredity is a convenient cloak to cover our ignorance of the several unknowns involved.

One’s idea of prognosis in primary hypertension as a whole may be clarified by a study of Dr. E. T. Bell’s report of his series of four hundred and twenty cases of essential hypertension subdivided into five groups on the basis of post-mortem findings and the major clinical symptoms. In that series, the causes of death were given as follows:

Myocardial insufficiency accounted for.....	187 or 44 %
Coronary disease accounted for.....	67 or 16.4%
Apoplexy accounted for.....	81 or 19 %
Renal deaths accounted for.....	36 or 8.6%
Miscellaneous (accident and intercurrent disease)	49 or 12%

The renal group die younger and faster, so may be called malignant. The heart, coronary and cerebral group are, as a whole, more benign. The majority die myocardial deaths.

Type 2. *Secondary Hypertension.*—(a) Fluctuating or Intermittent Type: It is controversial whether this type is an entity or a prodrome of chronic secondary hypertension. A diagnosis should only be made on repeated examinations with diastolic pressure as well as systolic pressure increased, for emotional states such as excitement, fear, or worry will often temporarily raise systolic pressures—not so definitely the diastolic. Women at the menopause certainly seem to have temporarily increased blood pressure, which later subsides to have no effect on longevity. Younger people in this group are said to have some “vasomotor instability” and not to belong to the hypertension class; certain ones of them, however, should be suspicioned of going on to a permanent hypertension. Hyperthyroidism in its early stage should be ruled out.

The group, however, as a whole has a good prognosis. Hypertension from urinary obstruction, anemia, and toxic nephrosis should be classed with the fluctuating types, as the hypertension disappears when the condition improves.

(b) Chronic Type: Chronic glomerulonephritis constantly gives a hypertension and a cardiac hypertrophy. We consider this a primary kidney disease, with secondary hypertension. Arteriosclerotic Bright's disease, which gives the so-called "primary contracted kidney," is associated with high blood pressure. Prognosis depends upon the type and extent of the kidney lesion and not the hypertension. Hypertension of hyperthyroidism is most often found in the toxic nodular group of goiter. Prognosis, of course, depends on the early recognition and proper handling of the goiter syndrome. It should be mentioned that general arteriosclerosis of aorta and peripheral arteries is not, as a rule, associated with hypertension.

No study of prognosis in hypertension is complete without a review of the records of insurance companies. Mortality among persons insured, and not insured, is comparable, and insurance statistics should, therefore, be of interest to clinicians.

The Actuarial Society of America and the Association of Life Insurance Medical Directors have a joint committee on mortality which reports from time to time on the effects of various medical impairments on the length of life of their policyholders, many companies accepting substandard risks at an increased consideration.

Insurance companies have perhaps the best statistics on what constitutes a normal blood pressure for American men. Their records of the percentage of increased mortality according to departure from average is interesting and exact.

One series of 707,000 normal men reported from twenty-six large insurance companies, with blood pressure readings from their thoroughly reliable examiners only, gave the following average normal blood pressures:

Age	Systolic	Diastolic	Pulse Pressure
20	120	79	41
30	122	81	41
40	125	83	42
50	129	85	44
60	134	87	47

The interesting statistics on just what becomes to hypertensives, and at what year of their disease, is very well shown by insurance companies' records. They die either cardiac, renal, or vascular deaths in a pretty high percentage; but whatever the cause, they die earlier than normal in direct proportion to increased blood pressure when averaged on a large group, and not taken as individuals.

The United States Census Bureau and Death Registry data, collected for years, give us tables of normal expected years of life from any attained age. For example, a man, age forty, all things being equal, on the average lives twenty-six more years or to age sixty-six. Given the one abnormal factor of a blood pressure of 160 systolic at age forty instead of the normal average blood pressure of 125 systolic, and he lives only thirteen years, or just half the normal man's expected time. Although not necessarily true of all individuals, given large groups of such and it is the true average expected and predictable result of hypertension.

In a large group of hypertension cases, deaths occur earlier than expected normals in direct pro-

portion to increase of both systolic and diastolic pressures. For instance, if the expected mortality for average normal blood pressure cases is 100 per cent in cases with 5 to 15 points increase in systolic pressure, we find an increased mortality to 113 per cent. With diastolic pressures 5 to 15 millimeters above normal, we find 115 per cent. Systolic and diastolic blood pressures 5 to 15 millimeters below normal give a reduced mortality to 94 and 93 per cent, respectively. Systolic and diastolic pressures beyond 15 millimeters above normal produce a very rapidly increasing death rate. We see that the mortality increases rapidly with the increase of blood pressure over average, and that the average blood pressure is not the point of lowest mortality, because a systolic or diastolic pressure slightly below normal brings a more favorable mortality. No evidence is available regarding very low pressures.

The good effect of a low blood pressure seems to be best at the older ages. The pulse pressure has little significance compared to the systolic and diastolic pressures. The most favorable group is that with both diastolic and pulse pressures slightly below normal. It is interesting to note that increase of blood pressure with an increase of weight was found to be uniform, but slightly more definite with the older ages.

Summary.—In conclusion, then, we may summarize as follows:

Given a knowledge of the heredity background of a hypertension person and the type of blood pressure increase, and we have sound basis on which to estimate prognosis. We see primary hypertension, either malignant and rapidly fatal, or benign and of long life. We see secondary hypertension—acute, fluctuating or intermittent—well when the nervous or organic disturbance causing it subsides, and a chronic secondary type having a prognosis dependent upon the disease underlying it.

Less important, yet nevertheless practical points to consider, are the patient's environment and occupation, social status, and intelligence. These factors may decide the amount of control one has over nervous strain or activity of mind and body, which are more important than diet and medicines in estimating longevity. Reduction in weight is important, however, as blood pressure seems often to reduce concomitantly.

It remains to be seen what permanent effects dinitrophenol may have upon the organism as a whole, after long-continued use or multiple courses, before deciding if its use may modify our ideas about the mortality rate among the hypertensives.

* * *

TREATMENT

JOHN C. RUDDOCK, M. D. (1930 Wilshire Boulevard, Los Angeles).—To treat hypertension we must, then, admit or presume that there is such a disease. If we presume that hypertension is an entity in itself, then any treatment instigated toward hypertension is logical.

Pathologists have been unable to determine the blood pressure of an individual, although they do

find many secondary evidences that have resulted from an increased blood pressure. Pathologists have also been able to discuss primary factors which should result in the clinical finding of a hypertension.

To presume that hypertension is an entity, in itself a disease, is wrong, because we know that increased blood pressure is secondary to a great many conditions.

In order to treat what is known as hypertension, one must determine the etiology of that disease before any treatment of a specific nature toward the increased blood pressure is logical. When there is an increase in the blood pressure, over the average normals, which has continued for any appreciable length of time, many changes occur in the body as a compensation for this increased pressure. These changes are insidious and slow, and, when complete, that increased pressure then becomes normal for that individual, and does not demand treatment. If we lower this pressure by means of therapy of any kind, the body again must go through a compensatory period for the new lowered level.

In order to outline treatment for cases of hypertension, one can divide the treatment into two classifications: First, search out and treat the underlying factor that has caused the hypertension; second, accommodate the patient and his life to the increased blood pressure so that it may become normal for that individual. Do not attempt to accommodate the blood pressure to the patient's life.

In searching out underlying factors in a case of hypertension, there is demanded of the clinician a thorough history of the present illness, a thorough past history of previous diseases, a thorough physical examination, in a search of a possible etiologic factor. There may be an early arteriosclerosis. There may be kidney pathology. There may be an endocrine disturbance. There may be nothing except hypertension.

However, arteriosclerosis certainly demands different handling than hyperthyroidism; and nephritis would certainly be treated differently than that case in which nothing was found.

An increase in the average blood pressure causes the patient to complain of various symptoms which may be attributable to the increased pressure itself. There may be headaches, excessive nervousness, pain in and around the heart, fullness in the head, dizziness, and other vague symptoms, that may or may not be constant; and upon physical examination, we often find a heart that is enlarged and hypertrophied, with forceful beats. These symptoms are not constant and usually disappear if the patient is put at rest. They are merely phenomena that are manifest before the body has fully compensated for the increased pressure. Most of these symptoms are disagreeable, and it is the thing that brings the patient to the doctor.

These symptoms should be alleviated by the various means that the practitioner has at his disposal. Acetyl-salicylic acid, pyramidon, are excellent measures for headache. Nervousness can

often be controlled by the simple bromid mixtures. All of them can be alleviated by a rest in bed.

The blood pressure, however, will remain constant. It should remain constant, because it is the result of a compensation in order to overcome some factor.

We should keep in mind, however, that when a hypertension is present the safety factor for that individual has been lowered. We know there are certain pressures beyond which arteries will break. We know that pressure increases with heavy meals, exercise, excitement, and since the safety factor has been decreased, then these other factors should be controlled. The patient should not be allowed to eat heavy meals. He should rest frequently often and sufficiently. He should not be allowed to have excessive emotional strains.

We know that in an individual with a hypertension and very marked cardiac hypertrophy, heart failure will eventually occur, and that individual must then be treated for a decompensated heart in the same manner as any other decompensated heart, irrespective of the tension. The treatment, however, of this type of heart failure is not satisfactory, because we are dealing with the end-result and the response to therapy is very poor.

We know that individuals with a hypertension are subject to various intracranial circulatory accidents, such as cerebral thrombi or hemorrhage. There are no preventive measures unless we say that it is less apt to happen in those persons whom we put at rest mentally and physically, on small meals, in whom there are no emotional storms.

However, we must admit that these complications occur in persons who are put in this status as well as those who are more active. Individuals with a long-standing hypertension are often seen with acute renal failure. It is questionable in these cases whether or not the kidney was the primary factor in the hypertension at the beginning, or whether we are dealing with changes in the arteries themselves. It is a question which has been much discussed in the medical literature.

In order to sum up in a few words concerning the treatment of hypertension, it is essential that the hypertension be classified, that an attempt be made to determine the underlying factor before logical treatment can be instituted. Hypertension is a bogie. It is something "that will get you if you don't watch out"! It is the cause of a great many neurasthenics among our patients in their attempt to reduce a blood pressure which has become normal to them, even though it is above the average normals. All drug therapy instituted toward the reduction of a hypertension is wrong. Drug therapy should be instituted entirely to alleviate the symptoms that are present in association with the increased pressure. Treatment of complications is merely preventive, and the regulation of the individual's life to the blood pressure is essential, not the attempt to regulate the blood pressure to the individual's life.

There are certain general measures of treatment that can be instituted in all cases: 1. Rest. 2. Diet. (Light meals, and not any specific type of diet.) 3. Regulating the social status and emotional life of the individual.

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EDITORIALS

THE 1934 ANNUAL SESSION

*Action on Two Major Plans Presented.**—This year's annual session of the California Medical Association—its sixty-third, by the way—has joined its historic predecessors. However, some of the work initiated at Riverside may still take years for completion, more particularly that which will come into being as part of the sickness survey authorized by the House of Delegates; by means of which it is hoped to accumulate and coördinate data on illness and the costs of sickness, with special reference to the needs of low bracket income groups among California citizens. A perusal of the minutes of the House of Delegates and the Council (as printed on pages 431 and 449 in this issue of CALIFORNIA AND WESTERN MEDICINE) will permit interested readers who were not in attendance at the annual session to better understand the various plans proposed, and the final action taken at Riverside.

Members of the California Medical Association are aware of the fact that for some time past its officers have been alert to the important changes which were threatening medical economics and

* The two plans here referred to are printed in the Minutes of the House of Delegates, under Monday meeting, as Item XVII (Resolutions 1 and 2, and 4 and 8) and under Wednesday meeting, as Item IX (Resolutions 4 and 8).

practice, not only in this State, but throughout the Union. It was in response to that feeling that the Council recommended to the House of Delegates, several years ago, the changes in the by-laws, making possible a standing Committee on Public Relations. Along the same line the Council voted in the year 1930 to instruct the California representatives to submit to the House of Delegates of the American Medical Association some resolutions asking that body to authorize the appointment of an American Medical Association Bureau of Medical Economics.* Both departments were thus brought into being, and each, in its own field, has done excellent work. Neither has satisfactorily solved, nor was it expected that they could so solve, many of the problems studied. For the matter of that, the national Committee on the Costs of Medical Care likewise failed, in its studies, to offer solutions acceptable to the profession and other interested parties. One of the difficulties seems to have revolved around the fact that physicians constitute a professional, instead of a trade or industrial guild, with the additional peculiarity of service rendered by an individual physician to an individual patient; so that attempts to mechanize and standardize such service into mass efforts at once met obstacles by no means easy to overcome and, in some instances, impossible to eliminate without destruction of basic elements in healing-art practice. It is only natural, therefore, that physicians should be reluctant to accept new plans of procedure in practice when such changes in methods give indications of dangers or defects, as great or greater than those existing in the system inherited from forebears of the last hundred years, or more.

* * *

Commendable Unanimity.—Because of perspectives such as those indicated above, it is understandable why, at Riverside, at least two methods of approach were advocated and fought for. And by the same token how it was possible that when one of the plans failed to receive the necessary two-thirds vote, the members of the House of Delegates, as the supreme governing body of the Association, should have unanimously concurred in the adoption of the other plan. It was a tribute to the broad vision of the members of the House of Delegates that, being in doubt about the scope and efficacy of what might be termed an "Alameda Plan on a Large Scale," they should have then given, without dissenting vote, full support to an alternative plan to make as thorough a study as possible of sociologic, economic and other conditions in California having a relation to sickness and its costs, and the place and functions of physicians therein, with special regard to new elements which may have arisen in our changing civilization.

* * *

Coöperation of all California Medical Association Members Desired.—It is not the purpose in these lines to discuss whether the action taken was the wisest possible. It is enough for us, as members of the California Medical Association,

* See CALIFORNIA AND WESTERN MEDICINE, Vol. XXXII, June, 1930, page 450.

to know that through our delegated representatives, in a meeting of rapt attention lasting until almost two o'clock in the morning, the House should have seen fit to endorse unanimously the other plan which provided for an intensive study of some of the major economic problems having to do with sickness, and by means of which it was hoped to place in possession of the Association reliable and comprehensive facts and figures on the subject; for use, if necessary, when the next California legislature convenes. Because our official spokesmen and representatives in the House of Delegates took that action, it is proper that every member of the California Medical Association should give to the Committee of Five (which is to be appointed: two members from the Council and three members from the House of Delegates*) every possible coöperation; for to such a platform of full coöperation, all must pledge themselves. * * *

Other Features of the Riverside Session.—Leaving now the domain of official business, it is of interest to know that the Riverside annual session was honored by the largest attendance thus far on record, a total of 1,618 registrations having been recorded.† The meetings were also remarkable because of the good fellowship so constantly in evidence. Much credit is due to Dr. W. W. Roblee's local committee on arrangements for its successful efforts in providing for the comforts and entertainment of visiting members. The Mission Inn headquarters, with its unique settings, to which hotel many members had the pleasure of making their first visit, was more than appreciated.

The meetings of the scientific sections were carried through in excellent fashion. Many of the papers will be printed during the coming year in CALIFORNIA AND WESTERN MEDICINE. The Community Health Meeting was the subject of much favorable comment.

Dr. George G. Reinle, Retiring President.—To the retiring president, Dr. George G. Reinle of Oakland, the thanks of the Association are extended for a year of efficient and active service. His efforts to place before many of the component county societies some of the problems confronting medical practice, and to enlist active interest therein from one end of this large and great state to the other, cannot result in other than good for organized medicine in California.

Dr. Clarence G. Toland, President.—To Dr. Clarence G. Toland, president until the California Medical Association meets in Yosemite National Park (probably in the latter part of May of 1935), go the pledges of whole-hearted support from all California Medical Association members.

* The Committee of Five on Study of Health Insurance Plans, as authorized by the House of Delegates is as follows: Chairman Kelly of the Council has appointed as the two Council members, Dr. Robert A. Peers of Colfax and Dr. Harry H. Wilson of Los Angeles; and Speaker Pallette of the House of Delegates has appointed as the three House members, Dr. Rodney A. Yoell and Dr. Alton R. Kilgore of San Francisco, and Dr. William R. Molony, Sr., of Los Angeles.

† The exact registration at the Riverside session was as follows: members, 1,157; guest physicians, 125; guests (technicians, nurses, etc.), 50; exhibitors, 44; members of Woman's Auxiliary, 242. Total, 1,618.

He may be relied upon, we are sure, to give the best that is in him to continued further progress of the California Medical Association in every direction.

Dr. Robert A. Peers, President-Elect.—Greetings are also extended to the new president-elect, Dr. Robert A. Peers of Colfax. Doctor Peers, for many years, has been a faithful and valuable servant in organized and scientific medicine. He is an excellent example of that fine and sturdy type of physician so characteristic of smaller counties, where the responsibilities of daily practice test out the man. His past experience, and his personal qualities, lead all who know him to anticipate with confidence that he will carry forward, in splendid fashion, both the work begun by his predecessors and that of his own day.

So much for Riverside. If you would know more of what was done, (and you should), then take the time to scan the minutes of the Council and the House of Delegates; and with mind alert ask yourself what solutions appeal most to you for many of the problems which came up for consideration and which your delegates, acting for you, were called upon to decide.

BUBONIC PLAGUE IN CALIFORNIA RODENTS

Rodent Plague has existed in California since the Year 1900.—The above caption may not appeal to some of California's lay citizens, but sometimes the truth must be told, even though the telling hurts. In last month's CALIFORNIA AND WESTERN MEDICINE, page 381, some comments on "Bubonic Plague" were printed, and these included the following:

"... It is well to remember (skeptics to the contrary notwithstanding) that all scientific evidence shows that the *Bacillus pestis* has a wide distribution in the rodent population of California; and that, given suitable conditions—as happened in the Mexican district of Los Angeles several years ago—an outbreak of bubonic plague among human beings could easily take place."

When expression was given to that thought, the editor knew, but did not feel at liberty so to state, that in certain California counties there had been a flare-up of plague in the ground squirrel population; of such extent, indeed, that the California State Board of Health had deemed it necessary to notify all health officers and physicians of existing conditions, so that if a case of human plague infection did occur it would be the more promptly recognized, and the situation could at once be gotten into hand.

An Official Report on the Present Outbreak.—Perhaps as good a way as any to bring this important California public health problem to the attention of the medical profession (as well as to place the medical profession of the state squarely on record) will be to quote from the April, 1934, report of the Bureau of Sanitary Inspections, a copy of which is sent to each of the seven physicians who constitute the California State Board of Health; and since, at the last meeting of the

Board, the editor requested and received its sanction to give publicity to existing conditions, these excerpts are taken from the report of Bureau Chief Ross:

Plague Survey of Rodents.—During the month, plague survey activities were carried on in the northern part of Kern and the southern part of Tulare counties. The entire personnel of the Bureau, with the exception of one member who was on vacation, were engaged in this work.

On April 16, in accordance with instructions from the director, the services of one additional experienced rodent control officer were obtained. This man had been a member of our plague survey crew for several years, but was dropped from the pay roll on June 30, 1933, due to lack of funds. On April 20, also in accordance with instructions from the director, five additional men, experienced in this line of work, were engaged. Employment of these men was made necessary because of the virulent type of disease found to exist, the rapidity with which it was spreading and the large area apparently involved.

The force engaged in this work is divided into three crews—one operating in the southeast section of Tulare County, one in the northern part of Kern County, and the third—consisting of two men with a light car—investigating reports of unusual conditions in squirrel-infested areas, and conditions which exist in the vicinity.

With reference to rural schools, each school in the district was visited and the teachers informed as to the condition existing in the ground squirrels, and they were requested to warn all pupils of the danger in coming into contact with, or in handling, ground squirrels. Later visits to the schools show that these requests have been carefully complied with. The agricultural commissioners were requested to institute immediate control measures in the areas around schools and they have informed me that this request has been complied with. . . .

To date, practically the entire area under suspicion has been hunted over and it is thought that the boundaries of infected areas in both counties have been determined. Many suspicious rodents have been sent either to the state laboratory, the United States Public Health Service laboratory, San Francisco, or the laboratory of the Hooper Foundation for Medical Research at San Francisco. . . .

The following is a consolidated report of summary of operations in Kern, Tulare, Monterey, and San Luis Obispo counties:

Number of ranches hunted on	143
Number of cities and towns visited.....	21
Number of ranches visited.....	162
Total squirrels shot	3,185
(Sent to laboratory, 39; <i>positive</i> , 34)	
Total squirrels found dead (poisoned).....	72
Total squirrels found dead.....	2,400
(Sent to laboratory, 122; <i>positive</i> , 106)	
Total rats trapped	8
(Sent to laboratory, 1; <i>positive</i> , 0)	
Total rats found dead (poisoned).....	0
Total of other rodents collected.....	2
Total rodent postmortem examinations.....	5,304
Plague demonstrated in squirrels	140
Plague demonstrated in rats	0
Number of plague foci located.....	24
Squirrels shipped to laboratory and found negative	21
Rats shipped to laboratory and found negative.....	1

* * *

Articles on Plague Which Have Been Printed in California and Western Medicine.—What is printed above, as taken from the files of the California State Board of Health, should be sufficient to show physicians, at least, that bubonic plague is no abstract or imaginary condition in California. In the May CALIFORNIA AND WESTERN MEDICINE, on page 365, is given a list of references to seventeen articles and items pertain-

ing to this matter which have been printed since 1927 in the official publication of the California Medical Association. This continued reference has not been by chance, but through intent to keep the subject alive and before the profession.* Concerning the outbreak in Los Angeles in 1924 (quoting from the November, 1927, CALIFORNIA AND WESTERN MEDICINE, page 685), we read:

"In all, there were thirty-two cases of pneumonic plague in this epidemic, of which thirty terminated fatally. There were ten persons living at the Samarano home at 742 Clara Street. Sixteen relatives and friends who visited the home during the illness of the first patient also developed pneumonic plague. Other contacts to develop the disease were the nurse, a Spanish priest, and the ambulance attendant. One case was not definitely traced. This patient was in *articulo mortis* at the time of admission to the hospital, and his friends could throw no light upon his whereabouts before being taken ill. . . .

". . . So far as we have been able to ascertain, pneumonic epidemics have arisen as the result of earlier bubonic infections. . . .

". . . In all, there were seven cases of bubonic plague in Los Angeles between October 24, 1924, and January 11, 1925. The symptoms were not to be distinguished from other cases of bubonic plague, but there are certain facts of particular interest. . . .

". . . Early in the investigation it was learned from reliable sources that an epizootic of some nature had occurred among the rats in the district where plague first made its appearance. As evidence that such an epizootic did occur, it may be mentioned again that the first rat to be proved plague-infected was found in a dying condition in a grocery store one block from where the first human case occurred. Also, that the address where two cases of bubonic plague occurred is only a few blocks separated from the first focus of human and rodent plague, and dead rats were found beneath the floor of the home where the Anderson Street cases occurred. . . .

". . . The study of our investigation leads us to the conclusion that the pneumonic epidemic was preceded by an epizootic among the rats some few weeks before the epidemic; that the first case of human plague to occur in the district was of bubonic type; that the pneumonic and the scattered bubonic cases were all of rat origin. We are reminded 'that rat fleas may be attracted to man, jump on him, but take some time to feed on him. This last observation is of importance in connection with the question of importation of infected fleas from place to place.' We are also of the opinion that in Los Angeles City and County the rat epizootic preceded, and was accountable for, the plague infection among the ground squirrels. . . ."

* * *

Coöperation Needed in This Emergency.—Need much more be said on the subject? In the face of such evidence, is it not most difficult to explain why the constituted authorities of so great a metropolitan center as the city of Los Angeles should be so reluctant (would "stubborn" be a better word?) to pass a rat-proofing building ordinance?

The California State Board of Health in this year 1934 has deemed it advisable to suggest the closing of certain schools in districts having an excess of plague-infected squirrels, hoping thereby to prevent some child picking up or contacting a dead and plague-infected squirrel, many of which have been found covered with fleas.

There is no desire in these comments to produce needless fear or to do harm to any of the State's interests. What is here written is given to

* See also article by Dr. Karl F. Meyer in this issue, on page 407.

keep the record of medicine clean, through advocacy of coöperation by state, county, and municipal authorities with representatives of the United States Public Health Service, so that all measures necessary to protect the public health may be properly instituted and carried through. If that is not done, it would seem to be only a matter of time until all California would again be forced to undergo plague experiences such as have already taken place in San Francisco and Los Angeles.

THE LOS ANGELES COUNTY HOSPITAL

A Thirteen-Million-Dollar Hospital Building.—A thirteen-million-dollar public hospital is something to talk about in both medical and lay circles. Such a single unit hospital structure, the largest of its kind in the world, has been erected by the taxpayers of Los Angeles County, and its official name is "The Acute Unit of the Los Angeles County Hospital." In this building several hundred members of the Los Angeles County Medical Association give to the many thousands of citizens who annually pass through its doors, as in- or out-patients, gratuitous service in medicine, surgery, and the specialties. These physicians and their predecessors have been giving such gratuitous service for many, many years. Now and then, patients have returned thanks to these kindly acting doctors; but since the majority of the patients come from the humbler walks of life, they probably think that all the members of the attending staff are being paid for their services. At least, such is the impression that is often gathered from conversations with the patients. It is a regrettable fact, but the attending physicians are not paid for the services so rendered on behalf of the county (a condition, unfortunately, true of other counties in California).

* * *

The Money Value of the Professional Services.—It has been estimated that the professional services of the attending staff members, when translated into money values even on a very modest fee table basis, approximate several million dollars yearly. Inasmuch as no money passes in the transaction, it is not of great import whether this be one, two or three millions a year; for it is still quite evident that an annual donation of one million dollars, given by a very small group of men to one of the richest counties in the United States, is nothing less than a massive donation.

* * *

Why Unappreciation Exists.—In this connection, one can forgive the lack of appreciation by some of the patients; because, after all, many of them do not possess the knowledge to understand what is being done for them. It is less easy, however, to pass over the well-to-do taxpayers and governing officials of the county, who can give no good reason for any such unappreciation. True it is, that the physicians themselves are in part to blame. It may be said of them that they have been so interested in the work to be done in the wards and clinics that they have given little, and often no thought to a consideration of what the public should know of the value of the professional work rendered in so large an institu-

tion. In this day in which we live, with its quite materialistic standards, such non-recognition of the worth of one's own work is promptly rewarded by equal unconcern on the part of those who should show appreciation; by which is meant, particularly, that large group of taxpayers to whom the annual donation of one or more millions of dollars of professional services is given. This characteristic loyalty of the medical profession to altruistic endeavor and to the profession's long traditions betokens a fine spirit of devoted service; but in our present era such indifference to self-interest and rights can become a real menace to both unselfish endeavor and to cherished beliefs and practices.

* * *

Annual Reports Should Be Printed by County Hospitals.—It seems logical, therefore, that the least that could be done by each county hospital of the State would be to annually print a record of the gratuitous professional work so done, with a statement of its money values, and then distribute such reports to the press and to all organizations interested in the public welfare. If such a procedure were the accepted rule, scientific medicine would find itself in possession of more friends than ever before; and a foundation could be laid thereon for a readjustment of this type of professional service, so that in time, perhaps, the taxpayers would feel that they really ought to pay for such service, just as they dispense for the food, medicines, and other material needs which are given to the patients.

* * *

The Dedication Addresses.—However, this line of thought is taking us afield from some comments on the massive building recently dedicated as the Acute Unit of the Los Angeles County Hospital. As indicated on page 402 of this issue, the dedication address was by Dr. Percy Magan of Los Angeles. Another speaker of the day was Dr. John Barrow, whose remarks as a representative of the staff are printed on page 406. In the Miscellany Department (on page 475) are given some descriptive text and other data concerning this new building. Members of the profession should scan these articles, because they deal with matters having an intimate relation to medical practice in California.

* * *

The Record of the Medical Profession Is Clear.—At this time we do not wish to discuss in any detail the merits or demerits of the imposing structure, some of the various features of which do not appeal to many physicians. There can be no question that much money was ill-advisedly spent. However, as to all this, the record of the attending staff is clear, since numerous and vigorous, though unavailing, protests by the staff representatives were duly made and registered.*

*References to other articles on the Los Angeles County Hospital which have been printed in CALIFORNIA AND WESTERN MEDICINE are as follows:

Vol. XXXII, No. 2, February, 1930, page 117—Editorial.
Vol. XXXII, No. 3, March, 1930, page 193—Editorial.
Vol. XXXIV, No. 5, May, 1931, page 376—Editorial.
Vol. XXXIV, No. 6, June, 1931, page 420—Editorial.
Vol. XXXV, No. 2, August, 1931, page 133—Editorial.
Vol. XXXVII, No. 1, July, 1932, page 69—Miscellany, News.
Vol. XL, No. 1, January, 1934, page 58—Editorial.
Vol. XL, No. 1, January, 1934, page 70—Miscellany, News.

Some of these matters were also discussed in CALIFORNIA AND WESTERN MEDICINE on page 193 of the issue for March, 1930. If blame for defects in structure and arrangement is anywhere to be placed, much of it must justly fall on the shoulders of the Associated Architects, who received the handsome sum of one million dollars, or so, for drawing the plans and supervising the construction of the building. Perhaps on some future occasion it may be desirable to comment on some of the features of this building as now constructed.

What we now deal with is a massive hospital edifice in real existence and seemingly constructed in most permanent form; the permanency factor, unfortunately, being true as to both its good and its bad features. It is earnestly hoped by the medical profession that it may always be utilized as indicated in the addresses of Doctors Magan and Barrow, wherein the ideal of the fullest and finest service to the deserving poor was so clearly emphasized.

POLIOMYELITIS

Is California to Experience a Poliomyelitis Outbreak?—Because it is important that all physicians in California should know that a poliomyelitis outbreak has started in the state, the editor requested Dr. J. D. Dunshee, director of the California Department of Public Health, to send some comments on the present situation. His article, printed on page 410, is worthy of the attention of every member of the California Medical Association.

At the meeting of the California State Board of Health, held on May 19, it was voted to send to every physician a special leaflet concerning the disease. Although the funds at the disposal of the State Board of Health are limited, it was felt that the seriousness of the impending situation warranted the expenditure. This pamphlet is now being printed and will be promptly placed in the mails. Any California Medical Association members desiring special information are invited to write to one of the three State Health Board offices (at Sacramento, San Francisco or Los Angeles), the addresses of which are printed in this issue, on advertising page 6.

EDITORIAL COMMENT*

RATIONAL ENDOCRINE THERAPY

There are certain principles in the study of endocrine medicine, amply supported by clinical and laboratory evidence, which should be accepted as the basis for present-day therapy. Students of the problem, whether clinicians or laboratory investigators, should be able to agree on several broad generalizations. It is with a desire to lessen the chaos in this field that the present discussion

is offered. Chaos will never be replaced by order until we know much more of our subject, so until that time the ever-present evil of commercial propaganda will probably have to be tolerated. The main point is not to allow it to obscure principles.

Deficiencies of thyroid function were early shown to be remedied by administration of desiccated thyroid substance by mouth, a fortunate thing for cases of hypothyroidism; but an unfortunate circumstance for the development of endocrine therapy, for it was loosely assumed by commercial houses and physicians alike that desiccates of various other glands carried the active principles of those glands and, what was perhaps more unfortunate, that such desiccates were active when administered by mouth. Endocrine therapy has not yet recovered from the handicap that this concept imposed. It is true that thyroid substance and the follicular hormone of the ovary in the form of theelol, or in desiccates, are active when administered orally. It is likewise true that certain other hormones are active by mouth when administered in enormous quantities; but at the present time cost is such an important item, and the method so inefficient that, for practical purposes, with the exceptions mentioned this method of therapy (?) might well be abandoned.

It would seem almost unnecessary to refer to the subject of shotgun therapeutics, but where in medical practice today is there such use of this method as in endocrine treatment? Shotgun therapy is in itself an admission of ignorance. Some may attempt to justify it on the basis of glandular interrelationships. It is true that we know of certain interdependencies, but we have not yet been able to measure these factors, and it would seem better judgment to defer acting therapeutically on this premise until more is known. It should be mentioned, however, that many more relationships have been postulated to exist than have ever been demonstrated satisfactorily. If more than one glandular product is to be used at a time, the physician should be the one to determine the proportions involved, and not the commercial house; yet the most casual attention to certain catalogues reveals a veritable wonderland of combinations offered with a view, it would seem, to minimize the thinking which the doctor does. Think of the patient, think of a number and the problem is solved!

It would likewise seem unnecessary to suggest that only products of proved potency be used; and yet far more therapy is attempted with inert products than with potent ones. One reputable company has on the market three anterior pituitary extracts (one is a pregnancy urine extract). Of these three products, two are potent. The third, the oldest of the three, has no appreciable growth-stimulating property, and practically no sex stimulating effect when tested in our hands; and yet it outsells by far the two potent products according to the recent statement of a contact man, and the house appears to be happy to meet the demands rather than retire the product.

Similarly, what justification there is for offering to physicians a pineal desiccate or its use by

* This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

them, in the absence of any acceptable evidence that the pineal has an endocrine function, is difficult to see. Likewise the thymus; likewise the spleen. We must force ourselves to require evidence rather than the rosy theoretical postulates that may be put forward as individual concepts.

One other matter: does the administration of a potent hormone stimulate the like gland in the patient's body, or does it tend to suppress its activity? This is a fundamental question, and one which should be answered only by impersonal evidence. The answer is not yet complete for the various glands. The direction of the evidence is away from the concept of gland stimulation toward rest of the gland in question. Quantitative differences in dosage have not been shown to influence this problem.

It would seem that fairly general agreement to the following statements should exist:

1. In general, hyperactivity of endocrine glands can be treated most satisfactorily by surgical interference or depressing x-radiation.

2. In hypofunction, critical evaluation of the potency of the particular product to be used in substitution is essential and, furthermore, potency tested by the same method of administration as that to be used therapeutically.

3. The use of more than one potent product at a time will probably be applicable to the minority of cases. Shotgun therapy is scarcely justifiable, whether the products be potent or inert.

San Diego County General Hospital.

HOWARD A. BALL,
San Diego.

WHO SHOULD BE STERILIZED?

I*

At the Norwalk State Hospital we advise sterilization in every case where we believe that it will help prevent future mental disease.

We firmly believe that the defective traits which result in insanity are transmitted from parent to child; but even if this belief is incorrect, and training and environment are the controlling factors, the parent who is either periodically or permanently handicapped by insanity cannot provide the proper home and training for offspring.

Observation of the parents of many of our patients would convince anyone that the child had somehow gotten characteristics from the parent. We may accept as a fact that the child inherited the shape of his nose and other physical traits, and still deny that he inherits any mental traits. But the fact remains that the child has these same traits, and if he didn't inherit them, he must have acquired them from training or environment. If this is true the parent has not, because of his own limitations, been an efficient parent.

Dementia praecox and manic depressive insanity form the vast majority of our admissions. The patients with dementia praecox tend to remain in hospitals, but many do reach a stationary level, leave the hospital, and beget children. We have several times failed to convince parents that

their daughters should be sterilized before leaving. They were so innocent, or so well protected, that pregnancy would be impossible. Later, these same daughters have been returned to the hospital pregnant, and the parents would be surprised at our refusal to induce abortion.

About 10 per cent of the offspring of parents with dementia praecox develop dementia praecox, but the incidence of the various traits classified as "psychopathic personalities" in the children of dementia praecox parents is much higher. We advise the sterilization of all women patients diagnosed dementia praecox who leave the hospital during the reproductive age, and of all men leaving the hospital, except those showing profound deterioration.

The development of insanity in the children of parents having manic depressive psychosis is at least three times as common as of parents having dementia praecox. This is probably largely influenced by the smaller number of dementia praecox patients who leave the hospital.

These patients, the manic depressives, recover from their attacks and return to home life. If the patient is a married woman, she frequently breaks under the strain of childbearing or lactation; if a man, additional children add to his economic burden. If single, the onset of another attack may be marked by sexual excesses, or an ill-advised marriage. These patients all deserve sterilization, for their own benefit as well as for eugenic reasons.

The following history is fairly common:

Case No. 8778. Manic depressive. Thirty-seven-year-old woman; Catholic; six children, ages three months to eleven and one-half years. Self-accusatory. Worries over premarital intercourse, and postmarital contraceptives. Following each birth, believed child was syphilitic; became depressed. Following last birth, attempted to kill child and self.

Formerly we saw little merit in sterilizing patients suffering from general paralysis of the insane. We felt that syphilitics usually aborted, and that the paretic lived but a short time, and was physically unable to reproduce.

Under present-day treatment, 30 to 50 per cent of the paretics leave the hospital, return to work, and are frequently restored to competency by the courts, as they meet the legal requirements of sanity. This condition is due to an acquired disease, but the permanency of this remission is very uncertain. The parent is definitely handicapped, and should be subjected to neither the stress of childbearing, nor the responsibility of raising children. The possibility of congenital syphilis must be recognized, as well as the liability of the child being orphaned at an early age. A child born to such a parent is sure to join the underprivileged class.

The paretics usually welcome sterilization when convinced that it does not alter sex desire or potency. One man visited the hospital a few weeks after going home, and requested that he be "unsterilized," and said he came at his wife's request, as she wanted more children. Our infor-

* From the Norwalk State Hospital, Norwalk, California. This paper is in two parts.

mation regarding the wife made us doubtful regarding her motives in making this request.

The hereditary transmission of epilepsy is doubtful, but there is no doubt that an epileptic parent cannot meet his responsibilities as a parent and, therefore, should be sterilized.

Psychosis develops in the various types of psychopathic personalities. These maladjusting individuals find themselves in intolerable situations, and have outbreaks resembling the various classical psychoses. When the unpleasant situation is corrected for them, their symptoms fade, but the instability and inability to adjust remain.

In this group are the thief, the pathological liar, the nomad, the chronic alcoholic, the drug addict, and the sex pervert. It is a frequent observation that at least one parent of these psychopathic patients has similar traits. These patients should be sterilized for all three of our reasons—to prevent the transmission of their undesirable traits to their offspring, because they make poor parents of underprivileged children, and because they are apt to have more mental outbreaks under strain of parenthood. The last is the least important, as responsibility weighs but lightly on most of these irresponsibles.

There is no conceivable reason to expect that sterilization will correct the desires and impulses of the sex pervert, and the advocating of such a procedure with promise of cure can only tend to discredit sterilization. Even castration in the male adult produces little, if any, immediate effect.

The instability in the feeble-minded results in attacks of the same kind that we see in the psychopathic personality group, and they should be sterilized for the same reasons.

The following is a sample case:

Case No. 8132. Female. Age, thirty-two. Has five children under twelve years. The oldest, a girl, is now a ward of the Juvenile Court. Patient is very promiscuous, and entertains men at home in the presence of her children. Sixth child was born at Norwalk State Hospital.

Norwalk State Hospital.

M. J. ROWE,
Norwalk.

(To be continued)

REDUCIBLE HERNIA AND LIFE EXPECTANCY

Abdominal hernia is more frequent than appendicitis and, excluding tuberculosis, it claims more victims than any other disease that afflicts man. It is estimated that one out of every fifteen individuals has a hernia of some form, usually inguinal. A person with hernia is barred from all branches of the government service and from municipal, police and fire departments, as well as many industrial organizations.

The earning capacity of such individuals is reduced 15 to 50 per cent, depending on the location and size of the hernia, and degree of control with a truss. Many life insurance companies refuse hernia subjects, others reject them unless the

hernia is small and easily held with a truss. At best the subject's life expectancy is shortened, his earning capacity diminished, and his usefulness to the community and his family lessened.

The prognosis of reducible hernia is always serious. While a majority of inguinal and umbilical hernia in infants (under two years of age) can be cured by mechanical treatment, there is danger that the hernia will slip by the truss and strangulate. However, at this age strangulation is not common. While there is a tendency on the part of some general surgeons to operate on young children earlier than formerly, it is held by some that, as a rule, mechanical treatment should be given a trial for small, easily retained hernias in children under four years old. Operative treatment at this age is attended by more dangers than in older children.

The infant is liable to develop pneumonia following the anesthetic, and is very susceptible to gastro-intestinal disorders when confined to bed. There is increased danger of wound infection from urine and feces, and when the baby is confined with other sick children there is considerable danger of such infectious diseases as diphtheria, scarlet fever, measles, erysipelas, and whooping-cough.

The radical operation is always to be recommended as the treatment in young children when the hernia cannot be controlled by a truss, or when the hernial opening does not decrease in size under palliative measures. In older children and adults, the operation offers the only prospect of cure; the danger is very slight, especially with local anesthesia, and the percentage of recurrence is very low.

To those patients in the advanced years of life all surgical procedures carry a multitude of dangers; the principal ones, perhaps, being the general anesthetic and the confinement to bed.

Fortunately, the primary development of hernia in the aged is infrequent, probably because these individuals avoid heavy labor in an effort to conserve their declining physical powers. Consequently, they are exempt from the usual causative factors of hernia that apply to the active years of life.

The possession of small reducible hernia is apparently more of an asset than a handicap; unless it becomes strangulated it does not shorten the duration of life, and it compels the individual to take care of himself, to avoid the heavy work and exposure with their attendant wear and tear on the body, which is the usual lot of the elderly individual who is sound.

The hernia of the aged is usually more difficult to control with a truss on account of the relaxation of the hernial rings. When operation is indicated, the danger can be minimized by the use of local anesthesia, and the period of confinement is shortened because recuperation is more prompt than after general narcosis.

727 West Seventh Street.

LEIGH F. WATSON,
Los Angeles.

STATE MEDICAL ASSOCIATIONS

This department contains official notices, reports of county society proceedings and other information having to do with the state associations and their component county societies. The copy for the department is edited by the state association secretaries, to whom communications for this department should be sent. Rosters of state association officers and committees and of component county societies and affiliated organizations, are printed in the directories noted under Miscellany, on the front cover index.

CALIFORNIA MEDICAL ASSOCIATION

CLARENCE G. TOLAND.....President
ROBERT A. PEERS.....President-Elect
EMMA W. POPE.....Secretary-Treasurer

HOUSE OF DELEGATES MINUTES

Minutes of the Thirty-First Meeting of the House of Delegates of the California Medical Association

First Meeting of the House of Delegates of the Sixty-Third Annual Session

Held in the Galleria, Mission Inn, Riverside, California, Monday, April 30, 1934, at 8 p. m.

I. **Call to Order.**—The meeting was called to order by the Speaker, Edward M. Palette of Los Angeles.

* * *

II. **Report of the Speaker on the Personnel of the Credentials Committee and Two Reference Committees.**—The Speaker stated that the first order of business was the announcement of the members of the three committees of the House of Delegates and announced that the Credentials Committee consisted of Lemuel P. Adams, Oakland (chairman); Charles T. Sturgeon, Los Angeles; and Ruggles A. Cushman, Talmage; that the Reference Committee on Reports of Officers and Standing Committees consisted of Alson R. Kilgore, San Francisco (chairman); E. Eric Larson, Los Angeles; and Philip Stephens, Los Angeles; that the Reference Committee on Resolutions and New and Miscellaneous Business consisted of William R. Molony, Sr., Los Angeles (chairman); Philip Gilman, San Francisco; and Frederick N. Scatena, Sacramento.

* * *

III. **Report of the Credentials Committee.**—On request of the Speaker, Lemuel P. Adams of Oakland, chairman of the Committee on Credentials, presented the report of the committee, and stated that the list of delegates and alternates had been checked and found to be correct.

On motion duly made, seconded and carried, the report of the Credentials Committee was adopted as submitted.

The Speaker stated that the members of the House of Delegates who were seated at the first meeting would serve as delegates on Wednesday evening unless a seated delegate voluntarily relinquished his seat.

* * *

IV. **Roll Call.**—The secretary called the roll; one hundred and twenty-five out of a total of one hundred and thirty-seven members, consisting of officers, delegates and alternates, were seated and the Speaker declared a quorum present. Twelve members were absent.

* * *

V. **Address of the President.**—The Speaker presented President George G. Reinle to the House of Delegates. Doctor Reinle addressed the delegates as follows:

Mr. Chairman—Ladies and Gentlemen:

Twelve months have passed since I addressed this body. I can honestly say that those have been the most pleasant twelve months of my life, not only because I have enjoyed the task as your president, but

also because of the splendid associations which this position entails.

My friend, Dr. Clarence G. Toland, is now about to assume the presidency and will carry on from here. I know that you will love him for himself and respect him for his high position in the medical world.

During the past year Doctor Toland has been splendidly cooperative, and his friendship I value more than I can tell you.

It has been a matter of gratification to me that we have been able to deal with our problems frankly, openly and honestly without the loss of friendship and respect one for the other. As a member of the medical profession I naturally have always had a high regard for that profession. I can say now that my respect and admiration for my fellow workers has increased a hundredfold during the last twelve months.

It is my duty at this time to speak to you briefly on various matters in connection with the State Association. One of these is medical legislation. I said at the morning session that the Committee on Legislation and Public Policy had done a big job well at Sacramento. I reiterate that statement.

To scan and weigh and analyze 3,900 separate bills introduced during the last legislative session was in itself a tremendous task. Of these bills, four hundred had some bearing on questions of public health and it was the duty of the committee to guard against the adoption of laws inimical to the public welfare.

Too much credit cannot be given to Dr. Junius B. Harris, chairman of the committee, who was obliged to practically abandon his private practice for one hundred days in order to watch this legislation.

Equally important has been the task of the legal department under Mr. Hartley F. Peart. His has been the responsibility of handling the litigation in connection with the unauthorized use of county hospitals; of assisting in the formation of a medical service plan, in itself a big job; and also of handling a wealth of legislative and other matters, including the problem of federal loans for the unnecessary increase of county hospitals.

It is unnecessary for me to emphasize the importance of the work done by the Cancer Commission of the California Medical Association. Their efforts represent the first attempt on a large scale to set down in definite form the combined experience and opinion of the profession.

I think we can say without undue exaggeration that California, through the efforts of the Commission, now holds the position of leading the country in cancer work. The report of the Commission, issued in book form, will be a priceless contribution to the profession and, of course, to the people we serve.

Public relations is becoming of increasing importance in connection with the Medical Association. Medicine today is more than ever before out in the open; and since this is true it devolves upon us to increase the scope of our public relations work.

Dr. Walter M. Dickie of the Department of Public Relations has accomplished much to this end in the last twelve months.

The County Institution Commissions seem to offer a solution to the problem of the supervision of county hospitals and clinics, and it would appear that the idea is being accepted more generally throughout the state. I believe that cooperation between component county societies and county supervisors will result in the establishment of more county institution commissions

and consequently a better supervision of county hospitals in California.

I think that all of us were deeply interested in the talks on medical economics given at the opening session. We were pleased to have with us Mr. Chester Rowell, a regent of the University of California and a newspaper editor of note, who spoke on the subject from the standpoint of the layman. It is interesting to observe that he urged that the medical profession take the lead in any state-wide plan of health insurance, whether originated by the profession itself or evolved through legislative action.

I think that most of us are thoroughly in accord with this viewpoint. Certainly if the medical profession intends to maintain the same status we have always maintained with respect to the relationship of physician and patient, we must take the lead in the formulating of any state-wide plan.

In conclusion, once again I wish to thank you, my friends and associates, for the fine, unselfish coöperation you have given during the last year. My heart is filled with gratitude toward you all. You will begin the new year under the leadership of a man of unquestioned ability, loved and respected by all, and I am sure that there is no member of our Association who will not do everything within his power to make the next year even more successful than the last.

I thank you.

GEORGE G. REINLE, *President*.

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The Speaker announced that the address of the president would be referred to the Reference Committee on Reports of Officers and Standing Committees.

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VI. Report of the Council.—The Speaker stated that the next order of business would be the presentation of the report of the Council by its chairman, T. Henshaw Kelly. Doctor Kelly then presented the following report:

GENERAL ACTIVITIES

The Council of the California Medical Association met four times, as required, during the year 1933-1934 and will meet four times during this annual session—a total of eight meetings in the year.

The usual routine matters of Association business were attended to and, in addition, the year has seen medicine and all of its traditions and activities in a marked state of flux, determined, no doubt, in the main, by the immense changes in all economic and business spheres engendered by the depression and the New Deal.

Much time and thought have been given to the problems of medicine by the Council and much work has been done to enable it to offer the foundation upon which solutions of many problems may be built. There is much to report of these activities of the Council, and the chairman feels that since financial reports, membership changes and other similar matters have been published in the report of the secretary-treasurer, these will be left uncommented upon here so as to limit the length of this report. These reports and the auditor's reports can be seen at the secretary's desk.

CORPORATE PRACTICE OF MEDICINE

Resolution No. 4 of the House of Delegates of 1933 instructed the Council to investigate the conditions of corporate practice of medicine in California and to take such action in reference thereto as it might deem proper and advisable.

The Council immediately began to study the matter and to plan such action as might be best in the circumstances.

Needless to say, a large number of concerns were (and many still are) practicing medicine illegally in the state. Numbers of these corporations were only out to mulct the people by promises of service and were quite successful in the accomplishment of their purposes.

The Council found that, despite the Painless Parker decision of the Supreme Court, the State Board of

Medical Examiners, advised by the office of the Attorney-General, was anxious to obtain a decision from the same body, based entirely upon a medical foundation and not a dental one. A suit was brought by the Board of Medical Examiners and is now in the courts, and it is the opinion of the Council that in this matter it must coöperate with the Board of Medical Examiners in awaiting a decision that can be used throughout the state. Starting proceedings on its own initiative would only complicate matters and lead the Association into indeterminate legal action and expenses, and the Council has offered its fullest coöperation to the Board of Medical Examiners and has had conferences with its representatives in furtherance of this assistance.

At the request of the Insurance Commissioner, Attorney-General Webb rendered an opinion on December 2, 1933, in which he stated that any corporation or individual furnishing hospitalization for periodic payments was engaging in insurance under the laws of California and, therefore, must comply with all of the provisions of the insurance laws of the state and be under the supervision of the Commissioner of Insurance.

Immediately the District Attorney of Alameda County began proceedings against several individuals who had been doing business outside the insurance laws and fleeing subscribers, and several of these men are now convicted and serving time.

Similar action is being taken in San Francisco.

This ruling of the Attorney-General, if enforced by the Insurance Commissioner and the District Attorneys of the State, will be of immense effect in curbing the activities of corporations and individuals whose intent is profit and not service.

The question of the illegal practice of medicine by corporations whose general intent is reasonably honest, while settled by existing cases in the opinion of our attorneys, must apparently await the decisions of the Supreme Court, which the Board of Medical Examiners is seeking and the California Medical Association can best serve by supporting the Board, the District Attorneys and the Insurance Commissioner in the prosecution of such cases as may come before them under the laws and rulings already in existence.

The Council recommends the adoption of the following resolution by the House of Delegates:

Resolved, That the House of Delegates of the California Medical Association offers the coöperation of the Association to the California State Board of Medical Examiners, to aid, by whatever means the said board may request, in the abolition of the illegal practice of medicine by lay individuals and corporations in the state of California; and be it further

Resolved, That the component county medical societies be requested to coöperate with and aid the district attorneys of their respective counties to prosecute individuals and corporations illegally furnishing medical or hospital service in California.

COUNTY HOSPITALS

The use of county hospitals by supervisors for the care of non-indigent patients has been a problem in San Joaquin, Santa Barbara, Kern, Fresno, and San Diego counties, and in 1932 a taxpayer in Santa Barbara County brought a suit to enjoin such use of the county hospital. The Association, realizing the importance of a decision in such a matter, aided in the preparation of the case and pending its hearing, the supervisors of Santa Barbara County leaned backward in enforcing definitions of indigency for admission to the hospital. A very technical defense was put up and a great amount of work was done by the local attorneys in Santa Barbara County and by the offices of our general and associate general counsel.

While the hearing of the Santa Barbara case was pending ten members of the Kern County Medical Society brought a similar suit against the Supervisors of Kern County to enjoin them from using that county hospital for any but indigent patients, and the California Medical Association lent its aid to the prosecution of this suit.

During the 1933 session of the legislature a bill was introduced from Santa Barbara County designed to open county hospitals to pay patients, but its author, Assemblyman Bliss, was willing to rewrite the bill to define indigency, with reasonable humanity and liberality, and to limit the use of county hospitals to patients coming under such a definition. However, near the end of the session, an amendment was demanded, making it obligatory for patients to pay less than the cost of their hospitalization if it were found that they could do so, and the California Medical Association, being unwilling to see this provision passed, agreed to the killing of the bill, and the litigation was continued.

By excellent work of legal counsel, a decision in favor of the plaintiffs in Kern County was rendered by Judge van Zante of Kings County, sitting at Bakersfield, and the supervisors were enjoined from using the Kern County Hospital for any but indigent patients, and they appealed the decision. They have apparently not adhered to the decision and are now cited for contempt, and to avoid this have asked the Supreme Court for a stay of execution pending this appeal, and arguments in this application are set for hearing in Los Angeles on June 5.

In Stanislaus County the Board of Supervisors apparently intends to open the County Hospital to pay patients when sufficient space can be had, and in Kern County the supervisors are pushing the "Kern County General Hospital Protective League" to continue an open county hospital, if necessary by legislation opening all county hospitals to non-indigent patients.

The Council recommends the adoption of the following resolution by the House of Delegates:

WHEREAS, There has been and is a determined effort on the part of persons within the state of California to open the doors of county hospitals to patients, regardless of their economic status; and

WHEREAS, Many taxpaying hospitals have been developed in California to care for the sick non-indigent and have large investments in their plants and service organizations that will be seriously injured or lost by competition with county hospitals; and

WHEREAS, Such use of county hospitals will add greatly to the existing tax burden in California; and

WHEREAS, The California Medical Association believes that the purpose of county hospitals is to care for the indigent sick and not to engage in the medical and hospital care of the population at large; therefore, be it

Resolved, That the Council of the California Medical Association be directed to use such efforts and resources of the Association as it may deem fit to maintain the functions of county hospitals within the limits prescribed by the present laws.

HEALTH INSURANCE

There has been, during the past year, a great interest in health and hospital insurance, particularly stimulated by the existence of the Senate Committee on Health Insurance, created by the last legislature, which committee is to study the matter of the costs of sickness and determine the advisability of some insurance plan for California.

Resolution No. 2 of the 1933 House of Delegates instructed the Council to parallel the work of the Senate Interim Committee and report to the House of Delegates at the 1934 annual session.

The Council, through a committee appointed by its authority, has maintained contact with this Senate committee and has considered carefully the course the Council should pursue in independent activity.

As late as March 29 of this year one member of the Senate committee stated publicly that the committee had not had a meeting and that the committee had no cut-and-dried plan.

However, it is highly possible that there will be enough demand made by vocal groups, often introduced into the state from without, to warrant the committee to prepare a plan for California and to submit it to the next legislature. The feeling of some is that any plan must be a compulsory one.

The Council of the California Medical Association feels that it is unwise to rush into a compulsory plan in the United States at this time. No other state has as yet felt the necessity to commit itself to such a radical step toward the solution of the problem and the systems upon which Europe depends, it believes, are not applicable to this country.

The Council is of the opinion that a voluntary plan will offer to the people of California the opportunity to reduce the individual cost of sickness and that the complaint that this cannot be done will no longer hold. Then certainly some time can be taken to determine whether it is vital to the health of California that the care of the sick be surrendered to the politicians because, regardless of what any may say to the contrary and from whence the money comes to support a compulsory plan, as soon as the plan is made compulsory by law a governmental agency must be set up to control.

In the United States of America governmental agencies are political and their complexion and motives are not always suited to the greatest good of the greatest number.

The Council recommends that this parallel study be continued, funds being provided for it if necessary, and that consultation and cooperation be had with the Senate committee to the end that a satisfactory solution of the problems involved may be had.

HOSPITALIZATION PLANS

The Council, after the most earnest thought and discussion, believing that the foundation upon which a solution of the problem of reducing the individual cost of illness could be built is a means of buying necessary hospitalization by periodic payments while well, instructed the general counsel of the Association to develop the organization of a plan which could be used as a basis for county organizations as approved by the Council in September, 1932.

After intense work such an organization was developed by the general counsel and members of the Alameda County Society, and in several other counties in the state plans were in abeyance awaiting the completion of the type of organization to be formed.

At this time the Attorney-General on December 2, 1933, rendered an opinion at the request of the Insurance Commissioner, stating that any individual or corporation selling hospitalization on periodic payment plans was doing an insurance business and must comply with all the provisions of the insurance laws and be supervised by the Insurance Commissioner.

This required an immediate review of the whole projected type of hospitalization plans because the amount of capital necessary, under the insurance laws, to form and operate a series of individual county society units was impossibly large, and after consultation with members of the Attorney-General's staff, it was deemed wise to comply with the insurance laws and not to seek exceptions.

The Council is of the opinion that if medicine in California is not to be forced into political solutions of the practice of medicine, it must offer a constructive plan to lessen the burden laid upon people by illness, believing that the development as rapidly as possible of a state-wide plan of hospitalization based upon small periodic payments is the basic need now and is the foundation upon which a complete health service can be built, directed that the plan be modified so that a state-wide organization could be produced.

The recommended type of organization is an insurance company on an assessment basis, doing business throughout the state through local administrative boards that will be composed of members selected by the component county societies—a majority—and members selected by the participating hospitals in the respective counties—a minority. Two or more counties, if desired, could be grouped into districts for the operation of the plan.

The state-wide corporation would have members selected from the officers of the California Medical Association and for the district or county administrative boards, and the California Medical Association

would appropriate the necessary capital to cover the requirements of the law and, if necessary, advance a small reserve, and each district would raise a small working capital based upon its size and probable business.

The corporation through its district administrative boards contracts with approved hospitals for hospital service and sells beneficiary certificates entitling the holder to hospitalization on a broad basis of coverage.

Fuller details are given in the general counsel's report.

The Council believes that the development of this plan throughout the counties of the state, as soon as is practicable, offers the beginning of a plan by which the medical profession can begin the solution of the modern costs of illness to patients and will obviate the questionable need of rushing into uncertain legislative experiments in the matter.

The Council recommends the adoption by the House of Delegates of the following resolution:

WHEREAS, It is desirable and possible for the California Medical Association to establish a plan and method of reducing the cost of illness and injury by causing the organization of an insurance corporation under the laws of the State of California to provide hospital service on a periodic payment basis, and to defray the cost of necessary anesthetic, laboratory and x-ray services to patients while hospitalized; and

WHEREAS, Such a corporation can and should be formed in full coöperation with ethical accredited hospitals; and

WHEREAS, The inauguration of such a service will constitute a truly progressive solution of many vexatious economic problems affecting the public welfare, and can be instituted without state aid, increase of taxes, or injurious results to the public health or scientific medicine; now, therefore, be it

Resolved, That the Council of the California Medical Association be, and it is hereby authorized and empowered to cause the organization of an insurance corporation under the laws of the State of California, to provide hospital service, and if the Council so determines, to defray the cost of said limited medical service to patients while hospitalized, without capital stock and with such incorporators, name, additional purposes, county where the principal office for the transaction of business is to be located, first directors, authorized number and qualifications of members, classes of membership, property, voting and other rights and privileges of each class of membership, liability of each and all classes to dues and assessments, and other provisions of its Articles of Incorporation, and By-Laws, as the Council shall prescribe, fix and determine; and be it further

Resolved, That there is hereby appropriated for the purposes hereof such sums and securities of this Association, whether held by the Association or by Trustees Of The California Medical Association, not exceeding the amount or value of \$35,000, as the Council may deem advisable or necessary to expend in carrying out the provisions hereof; and be it further

Resolved, That the Council is hereby authorized and empowered to take all such steps and proceedings, and to do any and all acts or things necessary in the name of this Association or otherwise, to carry this resolution into effect.

EMERGENCY RELIEF

In August, 1933, the California State Emergency Relief Administrator requested the coöperation of the California Medical Association in the formulation of plans for its medical care of the unemployed on relief by the physicians of California, under the principles laid down in Rules and Regulations No. 7 of the Federal Emergency Relief Administrator, which said that reasonable fees should be paid for home and office care, that as far as possible the patient-physician relationship should be maintained, and that existing clinic facilities should not be disturbed.

A tentative plan including a fee schedule was drafted in advance of the receipt of Rules and Regulations No. 7, and its principles were approved by the Executive Committee at a meeting on August 19, 1933, and

a committee appointed with power to act to place a plan in operation.

When the plan was accepted by the relief administrator, copies of it were sent to each component county society's secretary and these were advised to make contact with their county emergency relief committees.

In San Diego and Los Angeles counties, plans were immediately set afoot to care for the transient unemployed on relief, but in many of the other counties nothing much has been done because the federal funds which were supposed to be available to the counties were diverted to the CWA and county relief committees hesitated to adopt a plan which would add to their costs when no additional funds were obtainable from federal sources.

The CWA immediately upon its organization presented quite a problem, in so far as "industrial accidents" were concerned. It was ruled by the Federal Government that these patients should be taken care of by the United States Employees' Compensation Commission, and it began to use its designated physicians throughout the state and ruled that where federal physicians and hospitals were available these should care for injured CWA workers.

The Commission later ruled that all reputable physicians should be eligible to care for these patients, and in many communities this was done.

The criticism that can be made of the whole matter is that there are far too many agencies involved and far too many and rapid changes of policy and plans. No doubt an honest effort is being made to best solve the problem of the unemployed, but there is an enormous waste of time and effort in conferences, meetings, discussions, and paper work, because while these are going on, somewhere further up the line someone has changed his mind about the problem at issue.

At the present time it seems, from available information, that very few physicians have actually received any money for work they have done under any of these plans.

In order to develop an orderly plan in California the Council recommends the adoption of the following resolution by the House of Delegates:

WHEREAS, There has been considerable delay in the development of medical care under the Federal Emergency Relief plans because of the lack of any coördinative agency with sufficient authority to act in the medical field; and

WHEREAS, The Federal Government has recognized organized medicine as the agency through which the developments of this care should come; and

WHEREAS, It is necessary to have an agency in California and in the California Medical Association that can act rapidly and with authority in the development and coördination of plans for the medical care of unemployed on relief receiving federal funds; therefore be it

Resolved, That a committee of three be appointed by the Speaker from the membership of the California Medical Association, this committee to study the whole matter of the medical care of unemployed on relief under Federal Emergency Relief plans and to take such steps as it deems advisable to develop in California a central medical authority that shall have the power to develop and coördinate such medical care and its auxiliary services in all of the counties of California so that a coherent plan shall be maintained and operated; and be it further

Resolved, That the Council be authorized and empowered to defray the necessary traveling and other expenses of this committee.

LEGISLATION

The Council has considered from time to time the coming session of the legislature and urges upon the component county medical societies the necessity of maintaining friendly contact with the senators and assemblymen of their respective districts in order that these may be kept informed upon measures beneficial or inimical to the public health and the welfare of medicine in California.

BASIC SCIENCE INITIATIVE

The Special Committee will report on this, through Doctor Kress, its chairman.

COMMITTEE ON SURVEY OF EXPENDITURES

The Special Committee will report through Doctor Roblee, its chairman.

ANNUAL ASSESSMENT

The Council, after consideration of the activities of the Association, present and future, and the report of its committee on the expenditures of the Association, recommends that the dues for the year 1935 be fixed at \$10.

REDISTRICTING FIRST AND THIRD COUNCILOR DISTRICTS

Since the San Bernardino County Medical Society could be more efficiently served if the county were placed in the first district, comprising Imperial, Orange, Riverside, and San Diego counties, instead of the third district as it now is, the Council recommends the redistricting of the first district to include Imperial, Orange, Riverside, San Bernardino, and San Diego counties, and the third district to include Kern, San Luis Obispo, Santa Barbara, and Ventura counties, provided that this change is mutually agreeable to all county medical societies concerned.

The Speaker stated that the report of the Council would be referred to the Committee on Reports of Officers and Standing Committees, but that the resolutions contained therein would go to the Reference Committee on Resolutions and New and Miscellaneous Business.

VII. Report of the Committee on Survey of Activities and Expenditures of the Association.—At the request of the Speaker, William W. Roblee, chairman of the Council's Committee on a Survey of the Activities and Expenditures of the Association, submitted the following report:

Upon being notified of the appointment of the Committee on Activities and Expenditures, the chairman assigned certain subjects to the individual members for investigation, and at the meeting of the committee held Sunday evening, April 29, reports were made and discussed.

The committee reports as follows:

The secretary of the Association reports a very satisfactory renewal of memberships to date. Total memberships are greater than at this date last year, and we can see no reason why any diminution of income should occur this year. We feel that it is safe to budget our expenditures on the basis of last year's income.

We note with much gratification that the recommendations made by the Survey Committee and adopted by the House of Delegates at the last annual session have been largely carried out, with a resultant saving of nearly \$10,000. These economies and careful business management on the part of those responsible for Association expenditures have enabled it to finish the fiscal year with only a deficit of \$211, although some large items of unbudgeted expense have been incurred and paid.

Because of the very close survey and budgeting carried out last year, your committee has very few recommendations to offer for the coming year.

We concur in the recommended budget presented to the Council by the Budget Committee, and attached hereto, except for two minor additions, viz.:

In view of the cheerful assumption of extra work by the three clerical assistants in the main office whereby the force has been reduced from four to three in number, we recommend a \$10 increase instead of the 5 per cent proposed in the budget submitted. We recommend a \$15 monthly increase in the salary of Miss Mickle, who is now the stenographer for both

the Public Relations Department and the Cancer Commission.

The chairman of the Committee on Public Policy and Legislation estimates the needs of this committee for the coming year at \$2,500. His experience and judgment should be followed in this matter and we recommend this sum instead of \$2,191.20 that has been budgeted and that an additional amount be allowed this committee if in the course of its work during the coming session of the Legislature the Council deems additional expenditure necessary.

There have been occasions during the past year when the Council has been urgently requested by county societies to reimburse them for expenditures for legal services which were contracted without authorization by either the Executive Committee or the Council. We feel that the compliance with such demands, under any circumstances, sets a bad precedent and that the component county societies should be notified that hereafter such requests will be denied.

In view of the fact that the new provisions for handling the matter of hospital insurance and other economic problems, apparent and prospective, will without doubt entail radical readjustments of personnel, we recommend that all executive salary contracts be on a monthly basis and that the Council be authorized to make such adjustments in personnel as in its judgment are necessary.

Respectfully submitted,

(Signed) W. W. ROBLEE
ROBERT A. PEERS
N. N. BROWN
PHILIP STEPHENS

The Speaker stated that Doctor Roblee's report was a supplemental report to the report of the Council and would be referred to the Committee on Reports of Officers and Standing Committees.

VIII. Report of the Auditing Committee.—The Speaker stated that the next order of business would be the report of the Auditing Committee. Karl L. Schaupp of San Francisco, chairman of the committee, stated that the complete audit of the Association's finances had been published in the Pre-Convention Bulletin¹ in the April issue of CALIFORNIA AND WESTERN MEDICINE, and a copy was on file at the secretary's desk for the information of members. Doctor Schaupp then read an estimated budget for the year 1934.

The Speaker stated that the report of the Auditing Committee would be referred to the Reference Committee on Reports of Officers and Standing Committees.

IX. Report of the Secretary-Treasurer.—The Speaker stated that the report of the secretary-treasurer had been published in the Pre-Convention Bulletin² and would be referred to the Committee on Reports of Officers and Standing Committees.

X. Report of the Editor.—The Speaker stated that the report of the editor as published in the Pre-Convention Bulletin³ would be referred to the Reference Committee on Reports of Officers and Standing Committees.

Doctor Kress explained briefly the policies of the JOURNAL and stated that at present the number of papers from the preceding annual session, awaiting publication, was less than at any previous time since he had become editor of the JOURNAL.

1 See Pre-Convention Bulletin, CALIFORNIA AND WESTERN MEDICINE, April, p. 291.
2 See Pre-Convention Bulletin, CALIFORNIA AND WESTERN MEDICINE, April, p. 290.
3 See Pre-Convention Bulletin, CALIFORNIA AND WESTERN MEDICINE, April, p. 293.

XI. Report of the General Counsel.—At the request of the Speaker, General Counsel Peart submitted a detailed report on the work of the legal department. Mr. Peart outlined the work of the department in relation to the corporate practice of medicine; medical and hospital service plans, county hospital problems, and federal codes and emergency relief.

The Speaker stated that the report of the legal department as submitted by the general counsel would be referred to the Reference Committee on Reports of Officers and Standing Committees.

XII. Report of the Committee on Public Relations.—The Speaker stated that the next order of business would be the report of the Committee on Public Relations by the chairman, Charles A. Dukes of Oakland. Doctor Dukes stated that the report of the committee was published in the Pre-Convention Bulletin⁴ and that the only further statement he wished to make was to urge the establishment of county institutions commissions in the various counties.

The Speaker stated that the report of the Committee on Public Relations would be referred to the Reference Committee on Reports of Officers and Standing Committees.

XIII. Report of the Cancer Commission.—The Speaker stated that the report of the Cancer Commission would be submitted by Charles Dukes, chairman, who stated that the report had been published in the Pre-Convention Bulletin.⁵ The Speaker then referred the report to the Reference Committee on Reports of Officers and Standing Committees.

XIV.—Report of the Trustees Of The California Medical Association.—Upon request of the Speaker, the president of the Trustees Of The California Medical Association, T. Henshaw Kelly, submitted a report on the corporation.

The Speaker stated that the report of the Trustees Of The California Medical Association would be referred to the Reference Committee on Reports of Officers and Standing Committees.

XV. Report of the Special Committee on the Basic Science Law.—George H. Kress, chairman of the Special Council Committee on the Basic Science Law, upon request of the Speaker, submitted the following report:

To the President and the House of Delegates:

... In California the citizens have seen fit to provide three separate licensing boards for healing art practitioners. The nonsectarian or so-called old school or regular physicians and surgeons are licensed by the Board of Medical Examiners through laws passed by legislatures and commencing as far back as 1871. The osteopathic and chiropractic practitioners are licensed by separate boards through laws enacted by initiative vote of the people.

As regards preliminary education of these groups, the nonsectarian physicians and surgeons, in addition to four years of medical training, must first have possessed three years of preliminary education of collegiate standard. The osteopathic group enforces a full high school and some collegiate training. It is not known how much of a real high school education is enforced by the chiropractors. Probably not much, so far as real enforcement is concerned. . . .

It is a significant fact that every new cult of sectarian practitioners launches itself with large student bodies, most of whose members possess little more than a common school training, even though nearly always burning with ambition to be "doctors." A sectarian group with standards as low or lower than those of the chiropractors is again making a strenuous effort

to secure, through initiative vote of the citizens, the sanction of the state of California to launch a new mass of cultist practitioners on the public. . . . It becomes the duty of all California citizens who believe in decent educational standards for so responsible a profession as that of the healing art to take stock of the situation which faces our State in this year 1934. In such stock-taking, nonsectarian practitioners, because of their superior training, have special obligations to their lay fellow citizens. So, also, has the mouthpiece of organized, scientific medicine, the California Medical Association, a very special responsibility in all this.

The California Medical Association must decide questions, therefore, such as the following:

1. Shall, or shall not, a new cultist group, with inferior educational training qualifications, be permitted, without opposition, to secure the state's legal sanction by means of which several thousand additional cultists and practitioners, probably poorly trained, would be thrown upon the public as "doctors," to practice particularly among that portion of our citizenship least able to afford the diagnostic and therapeutic mistakes so often manifest in the work of poorly educated and inadequately trained practitioners.

2. If opposition to the passage of such a law is to be made, what plans can be suggested that would offer the best method of nullifying such a cultist act, and others likewise, which, in all probability, judging by past experience, may be expected to be brought forward in the future.

3. What part should the California Medical Association, directly or indirectly, desire to take in opposing a law that would sanction the licensing of such poorly trained sectarian practitioners of the healing art?

Assuming now, that the members of the California Medical Association hold that organized scientific medicine owes it to itself and to the state to protect lay citizens from poorly trained practitioners, and that one of the best proved means of nullifying the efforts of low standard cults, is through the enactment of a basic science, or qualifying certificate law, let us consider some of the problems which will arise when the passage of such a healing art law is placed before the people for their ballots.

First, as regards the basic science or qualifying certificate law. This has been discussed in CALIFORNIA AND WESTERN MEDICINE since the year 1930, the references being given on page 211 of the issue for March, 1934. . . .

In the plan outlined in the March CALIFORNIA AND WESTERN MEDICINE, the board of five examiners would come from the liberal arts faculties of the University of California, Stanford University, Santa Clara University, the University of Southern California, and the California Institute of Technology. . . .

The five subjects can be taken from the following: English, physiology, chemistry, anatomy, botany, zoology, biology, and physics. . . .

The standard of knowledge required is that required for entrance into college (that is, a four-year high school knowledge). . . .

It would also be necessary to decide whether the qualifying certificate should be obtained, prior to matriculation, in a healing art school, or only prior to taking the examination for legal licensure (that is, after graduation from a healing art school). . . .

In what form, then, shall the basic science or qualifying certificate law be presented to the electorate? The law can either be enacted by the legislature, which will convene on January 2, 1935, or by initiative vote of the people on November 6, 1934; but such a proposed initiative law must have its petition with 111,000 or more signatures, all attested and filed prior to July 18, 1934, which is only seventy days from now. . . .

So that, if a qualifying certificate law is now to come into existence in California, so worded as to be applicable to the three groups already legalized (*i. e.*, the regulars, the osteopaths and the chiropractors) and also to the proposed naturopathic initiative laws or those of any other cult of the future, it would be necessary for the California Medical Association to decide on its course of action at once. In this particu-

⁴ See Pre-Convention Bulletin, CALIFORNIA AND WESTERN MEDICINE, April, p. 301.

⁵ See Pre-Convention Bulletin, CALIFORNIA AND WESTERN MEDICINE, April, p. 302.

lar problem which faces us, if action is to be taken at all, it may be stated that time is part of the essence of the contract.

Respectfully submitted,

SPECIAL COMMITTEE ON QUALIFYING CERTIFICATE
LAW. By George H. Kress, *Chairman*.

† † †

The Speaker stated that the report of the Special Committee, being new business, would be referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

* * *

XVI. Unfinished Business:

(a) *Amendments to the Constitution*.—The Speaker stated that at the last annual session three amendments to Article X, Sections 1, 4, and 15 had been submitted to provide for the set-up of the Committee on Public Relations.

The secretary stated that each of the following amendments were introduced by T. Henshaw Kelly at the 1933 House of Delegates and had been published twice in separate issues of CALIFORNIA AND WESTERN MEDICINE (June and December, 1933), and read as follows:

ARTICLE X

Officers

Section 1. Officers. The officers of this Association shall be a president, a president-elect, a secretary-treasurer, a speaker of the House of Delegates, a vice-speaker of the House of Delegates, an editor, **the chairman of the Committee on Public Relations*, and fifteen councilors (six of the fifteen councilors being elected as at large, and nine from councilor districts, as herein provided).

ARTICLE X

Section 4. Officers as Ex-Officio Members of Council.

The president, president-elect, and speaker of the House of Delegates, **and the chairman of the Committee on Public Relations* shall be ex-officio members of the Council, with all the rights of councilors.

The secretary-treasurer and the editor shall also be ex-officio members of the Council, but shall not have the right to vote; provided, that a secretary-treasurer or an editor who is not a member of the Association shall not be an ex-officio member of the Council.

ARTICLE X

**Section 15. Election, Term of Office and Duties of the chairman of the Committee on Public Relations.*

The election, term of office and duties of the chairman of the Committee on Public Relations shall be provided in the By-Laws.

On motion of Langley Porter of San Francisco, seconded by T. Henshaw Kelly of San Francisco, the amendments to Article X, Sections 1, 4, and 15 were unanimously adopted.

* * *

XVII. New Business.—The Speaker stated that the next order of business would be the presentation of new business and resolutions.

RESOLUTIONS

T. Henshaw Kelly of San Francisco presented the following resolutions which had been included and read in the report of the Council:

*Resolution No. 1, Cooperation with Board of Medical Examiners.*⁶—Recommended by the Council as follows:

Resolved, That the House of Delegates of the California Medical Association offers the cooperation of the Association to the California State Board of Medical Examiners, to aid, by whatever means the said Board may request, in the abolition of the illegal practice of medicine by lay individuals and corporations in the state of California; and be it further

Resolved, That the component county medical societies be requested to cooperate with and aid the

district attorneys of their respective counties to prosecute individuals and corporations illegally furnishing medical or hospital service in California.

† † †

*Resolution No. 2.*⁶ (Sec footnote.)

† † †

*Resolution No. 3, Use of County Hospitals.*⁷—Recommended by Council as follows:

WHEREAS, There has been and is a determined effort on the part of persons within the state of California to open the doors of county hospitals to patients regardless of their economic status, and

WHEREAS, Many taxpaying hospitals have been developed in California to care for the sick non-indigent and have large investments in their plants and service organizations that will be seriously injured or lost by competition with county hospitals, and

WHEREAS, Such use of county hospitals will add greatly to the existing tax burden in California, and

WHEREAS, The California Medical Association believes that the purpose of county hospitals is to care for the indigent sick and not to engage in the medical and hospital care of the population at large; therefore, be it

Resolved, That the Council of the California Medical Association be directed to use such efforts and resources of the Association as it may deem fit to maintain the functions of county hospitals within the limits prescribed by the present laws.

† † †

*Resolution No. 4, Hospitalization Plan.*⁸—Recommended by Council as follows:

WHEREAS, It is desirable and possible for the California Medical Association to establish a plan and method of reducing the cost of illness and injury by causing the organization of an insurance corporation under the laws of the state of California to provide hospital service on a periodic payment basis, and to defray the cost of necessary anesthetic, laboratory and x-ray services to patients while hospitalized; and

WHEREAS, Such a corporation can and should be formed in full cooperation with ethical accredited hospitals; and

WHEREAS, The inauguration of such a service will constitute a truly progressive solution of many vexatious economic problems affecting the public welfare, and can be instituted without state aid, increase of taxes, or injurious results to the public health or scientific medicine; now, therefore, be it

Resolved, That the Council of the California Medical Association be, and it is hereby authorized and empowered to cause the organization of an insurance corporation under the laws of the state of California, to provide hospital service, and if the Council so determines, to defray the cost of said limited medical service to patients while hospitalized, without capital stock and with such incorporators, name, additional purposes, county where the principal office for the transaction of business is to be located, first directors, authorized number and qualifications of members, classes of membership, property, voting and other rights and privileges of each class of membership, liability of each and all classes to dues and assessments, and other provisions of its Articles of Incorporation, and By-Laws, as the Council shall prescribe, fix and determine; and be it further

Resolved, That there is hereby appropriated for the purposes hereof such sums and securities of this Association, whether held by the Association or by Trustees Of The California Medical Association, not exceeding the amount or value of \$35,000, as the Council may deem advisable or necessary to expend in carrying out the provisions hereof; and be it further

Resolved, That the Council is hereby authorized and empowered to take all such steps and proceedings, and to do any and all acts or things necessary in the name of this Association or otherwise, to carry this resolution into effect.

⁶ Amendments are placed in italics.

⁶ Resolution No. 1 as submitted by the Council was divided into two resolutions and submitted as Resolutions No. 1 and No. 2 by the Reference Committee. See second House of Delegates meeting for amended resolutions and action thereon.

⁷ See second House of Delegates meeting for amended resolutions and action thereon.

⁸ See second House of Delegates meeting for amended resolutions and action thereon.

*Resolution No. 5, Federal Emergency Relief.*⁹—Recommended by Council as follows:

WHEREAS, There has been considerable delay in the development of medical care under the federal emergency relief plans because of the lack of any coördinative agency with sufficient authority to act in the medical field, and

WHEREAS, The Federal Government has recognized organized medicine as the agency through which the development of this care should come, and

WHEREAS, It is necessary to have an agency in California and in the California Medical Association that can act rapidly and with authority in the development and coördination of plans for medical care of unemployed on relief receiving federal funds; therefore be it

Resolved, That a committee of three be appointed by the Speaker from the membership of the California Medical Association, this committee to study the whole matter of the medical care of unemployed on relief under federal emergency relief plans and to take such steps as it deems advisable to develop in California a central medical authority that shall have the power to develop and coördinate such medical care and its auxiliary services in all of the counties of California so that a coherent plan shall be maintained and operated; and be it further

Resolved, That the Council be authorized and empowered to defray the necessary traveling and other expenses of this committee or its agents.

‘ ‘ ‘

*Resolution No. 6, Basic Science Law.*¹⁰—Recommended by Council as follows:

Resolved, That the Council of the California Medical Association be directed and empowered to do all those things and expend such funds of the California Medical Association as it may deem necessary to secure the adoption of an initiative Basic Science Act by the electors of California at the fall election in 1934 with such provisions contained in the act as the Council may determine.

‘ ‘ ‘

The Speaker stated that the six foregoing resolutions would be referred to the Committee on Resolutions and New and Miscellaneous Business.

‘ ‘ ‘

*Resolution No. 7, Medical Guild.*¹¹—Submitted by Irving S. Ingber of San Francisco at request of Randolph G. Flood of San Francisco, as follows:

WHEREAS, The medical profession is at present facing a definite economic crisis due partly to the inability of any organization properly to control the unethical activities of a small minority, with the result that the entire profession is being exploited; and

WHEREAS, There is a tendency at this time on the part of political groups to take away the control of the practice of medicine from the profession where it rightfully belongs; and

WHEREAS, The entire medical profession is too loosely bound to combat effectively these tendencies; therefore be it

Resolved, (1) That a Medical Guild Corporation of California be formed, the function of which shall be purely executive and which will not replace or encroach upon the functions of the present California Medical Association except as outlined herein.

(2) That it shall be compulsory for all practitioners to be members of this Guild and pay dues to it as they do at present to the Board of Medical Examiners. The amount to be determined later.

(3) That the Guild Corporation be governed by a Board of Medical Governors which shall be elected by popular ballot of the active members of said Guild.

(4) That the present Medical Practice Act of California be amended to include a modified code of med-

ical ethics emphasizing particularly the corporate practice of medicine and the rebating and splitting of fees.

(5) That the present Medical Practice Act be further amended to the extent that the Board of Medical Governors shall have the sole power to issue and revoke all licenses to practice in this state and, further, to grant to the said Board of Governors the right to bring a defendant charged by them of violation of the amended Medical Practice Act directly into the Supreme Court where said defendant shall be tried without jury and denied the right of appeal.

(6) That this House of Delegates approve these recommendations and request the president of the Association to appoint a committee of three to incorporate into a finished instrument the above resolutions and further grant this committee the privilege to draw upon the treasury of the state society to the extent of any legal fees they may assume.

(7) That when the committee has completed the final details of the act, which shall include all of the above suggestions, the completed instrument be returned to the various county groups for approval before it is introduced as an initiative or legislative measure as the committee may recommend.

‘ ‘ ‘

The Speaker stated that the foregoing resolution on a Medical Guild would be referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

‘ ‘ ‘

*Resolution No. 8, Special Survey Committee of Five.*¹²—Submitted by Irving Ingber of San Francisco at the request of the San Francisco delegation, as follows:

Resolved, That a committee be, and hereby is constituted, consisting of two members of the Council to be appointed by the chairman of the Council, and three members of the House of Delegates to be appointed by the Speaker of the House, whose duty shall be the consideration of health insurance.

Resolved, That this committee shall be instructed to conduct an adequate study and survey of the problem as it applies to California and to formulate a plan for the administration of health insurance and to prepare a bill for suitable legislation which may be available for presentation in the 1935 session of the California State Legislature.

Resolved, That the Council be, and is hereby instructed, to appropriate funds sufficient to employ adequate and competent technical and legal assistance and advice for the purpose of this committee.

‘ ‘ ‘

The Speaker stated that the resolution on health insurance would be referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

‘ ‘ ‘

*Resolution No. 9, Physicians Appearing on Radio Programs.*¹³—R. E. Ramsay of Pasadena presented the following resolution:

WHEREAS, The practice of physicians appearing on advertising radio programs under a pseudo scientific pretense is becoming far too prevalent; and

WHEREAS, This practice is subversive of the best interests of the public and the profession; therefore be it

Resolved, That the House of Delegates of the California Medical Association establish and promulgate a rule of professional conduct in the premises.

‘ ‘ ‘

The Speaker stated that the foregoing resolution on radio broadcasting would be referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

⁹ See second House of Delegates meeting for action on resolution.

¹⁰ See second House of Delegates meeting for amended resolution and action thereon.

¹¹ See second House of Delegates meeting for amended resolution and action thereon.

¹² See second House of Delegates meeting for action on resolution.

¹³ See second House of Delegates meeting for amended resolution and action thereon.

*Resolution No. 10, Practice of Radiology in Hospitals.*¹⁴—Leo Henry Garland of San Francisco presented the following resolution:

WHEREAS, It is to the interest of the public and to the interest of every medical man to preserve the rights of physicians in the practice of his profession; and

WHEREAS, Any infringement on these rights which develops, knowingly or unknowingly, is a potential danger to every member of organized medicine, as well as to those directly involved; and

WHEREAS, A condition has gradually developed in connection with the practice of medicine, radiology, in hospitals, whereby the hospital, a corporation, is practicing medicine instead of the roentgenologist, a licensed physician and surgeon; and

WHEREAS, A precedent is thereby offered for the practice of other branches of medicine and surgery by the hospital and by corporations in general; and

WHEREAS, It is believed by this House that such practice is detrimental to the best interests of the patient, the hospital, and the medical profession; now, therefore, be it

Resolved, That this House directs the Executive Committee of the Council of the California Medical Association to appoint a committee of three, one of whom shall be a recognized roentgenologist, whose duty it shall be:

(a) To contact the executive committees of the various Western Hospital Associations in order, singly and/or jointly,

(b) To study the exact relations existing between each and every hospital x-ray department and the radiologist in charge thereof, and

(c) To suggest to the physician and hospital involved the means of arriving at a mutually satisfactory and honorable agreement, thereby relieving the institution of the charge of practicing medicine; and be it further

Resolved, That the secretary of the California Medical Association be instructed to transmit copies of this resolution to the secretaries of all component county medical societies; to all hospital superintendents, to the medical executive committees of the hospitals, and to all directors of public health departments in the state of California.

The Speaker stated that the foregoing resolution on the practice of radiology in hospitals would be referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

*Resolution No. 11, Practice of Pathology in Hospitals.*¹⁵—George D. Maner of Los Angeles presented the following resolution on the practice of pathology in hospitals:

WHEREAS, It is to the interest of the public and to the interest of every medical man to preserve the rights of physicians in the practice of his profession; and

WHEREAS, Any infringement on these rights which develops, knowingly or unknowingly, is a potential danger to every member of organized medicine, as well as to those directly involved; and

WHEREAS, A condition has gradually developed in connection with the practice of medicine (pathology) in hospitals whereby the hospital, a corporation, is practicing medicine, instead of the pathologist, a licensed physician and surgeon; and

WHEREAS, A precedent is thereby offered for the practice of other branches of medicine and surgery by the hospital and by corporations in general; and

¹⁴ Resolution No. 10 and Resolution No. 11 were combined by the Reference Committee. See second House of Delegates meeting for amended resolution and action thereon.

¹⁵ Resolution No. 10 and Resolution No. 11 were combined by the Reference Committee. See second House of Delegates meeting for amended resolution and action thereon.

WHEREAS, It is believed by this House that such practice is detrimental to the best interests of the patient, the hospital, and the medical profession; now, therefore, be it

Resolved, That this House directs the Council of the California Medical Association to appoint a committee of three, one of whom shall be a recognized pathologist, whose duty it shall be:

(a) To contact the executive committees of the various Western Hospital Associations in order, singly and/or jointly,

(b) To study the exact relations existing between each and every hospital pathology department and the pathologist in charge thereof, and

(c) To suggest to the physician and hospital involved the means of arriving at a mutually satisfactory and honorable agreement, thereby relieving the institution of the charge of practicing medicine; and be it further

Resolved, That the secretary of the California Medical Association be instructed to transmit copies of this resolution to the secretaries of all component county medical societies; to all hospital superintendents, to the medical executive committees of the hospitals, and to all directors of public health departments in the state of California.

The Speaker stated that the foregoing resolution on the practice of pathology in hospitals would be referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

*Resolution No. 12, Dual X-Ray Fee Schedule.*¹⁶—John Hunt Shephard of San Jose presented the following resolution on the dual fee schedule for x-ray work for the Industrial Accident Commission:

WHEREAS, The State Industrial Accident Commission has seen fit to promulgate two fee schedules for x-ray examinations of injured employees treated under the Workmen's Compensation Act of the state of California; and

WHEREAS, The insurance companies writing compensation insurance in California have followed the example of the State Industrial Accident Commission; and

WHEREAS, Such arbitrary action on the part of the Industrial Accident Commission is inimical to the welfare of employees and the medical profession; and

WHEREAS, Such action on the part of the State Industrial Accident Commission must be interpreted as the initial step of a policy which eventually will lead to a complete disruption of the accepted minimum fee schedule for the care of injured employees under the Workmen's Compensation Act; therefore be it

Resolved, By the House of Delegates of the California Medical Association at its sixty-third annual session held at Riverside, California, that the Council of the California Medical Association be and is hereby directed, through its Executive Committee, to hold a conference with the officers of the State Industrial Accident Commission for the purpose of calling to their attention the impropriety of making any change in said minimum fee schedule without first consulting with and obtaining the consent of the Council of the California Medical Association; and be it further

Resolved, That if the officers of the Industrial Accident Commission refuse to dispense with the double fee schedule for x-ray examination of injured employees protected under the Workmen's Compensation Act of the state of California, the Council of the California Medical Association shall, in that event, appeal to the directors of the Industrial Accident Commission for an order restraining the State Industrial Accident Commission and all insurance companies writing compensation insurance in the state of California, from promulgating or attempting to promulgate any

¹⁶ See second House of Delegates meeting for amended resolution and action thereon.

changes in the minimum fee schedule for services rendered employees under the Workmen's Compensation Act of the state of California without first obtaining the consent of the Council of the California Medical Association to any such proposed change.

The Speaker stated that the foregoing resolution on the dual fee schedule would be referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

*Resolution No. 13, Relationship of Press and Medical Profession.*¹⁷—LeRoy Brooks of San Francisco presented the following resolution on the relationship of the press to the medical profession:

Resolved, That it is the sense of the House of Delegates that the Council should instruct the component county societies to establish a closer relationship between the press and the medical profession.

The Speaker stated that the foregoing resolution on the relationship of the press to the medical profession would be referred to the Reference Committee on Resolutions and New and Miscellaneous Business.

(b) *Amendments to the Constitution and By-Laws.*¹⁸—T. Henshaw Kelly of San Francisco, on behalf of the Council, submitted the following amendment to the By-Laws:

Resolved, That the By-Laws be amended by adding thereto a new chapter to be numbered XIII, reading as follows:

"Chapter XIII. Corporations. To further aid in carrying out the objects of the Association the House of Delegates at any meeting at any regular or special session thereof, may by a two-thirds vote of the membership thereof present and acting, authorize, empower and direct the Council to cause the formation and organization of one or more corporations under the laws of the state of California with such incorporators, name, purposes, county where the principal office for the transaction of business is to be located, first directors, the total number of shares, the aggregate par value if any of all shares, classes of shares, par value of any shares having par value, statement of the provisions, privileges and restrictions granted or imposed upon the respective classes of shares, or if the corporation be formed without capital stock, the authorized number and qualifications of its members, the different classes of members, if any, the property, voting and other rights of each class of members and the liability of each and all classes, to dues or assessments, and with such further provisions in the articles of incorporation thereof and with such by-laws as the Council shall prescribe, fix and determine; and the House of Delegates at any meeting of any regular or special session thereof may by a vote of two-thirds of the members thereof present and acting, authorize, empower and direct the Council to grant, assign, transfer, convey or deliver or cause to be granted, assigned, transferred, conveyed or delivered to any of such corporations upon the formation thereof or to applicants for health and accident or other insurance in or from any of said corporations at or prior to the formation thereof without any consideration therefor, such funds and property, real or personal, of this Association as the House of Delegates shall from time to time authorize or ratify."

The Speaker stated that the amendment to the By-Laws, Chapter XIII, would be acted on at the Wednesday meeting of the House of Delegates.

¹⁷ See second House of Delegates meeting for amended resolution and action thereon.

¹⁸ See second House of Delegates meeting for action on by-law.

T. Henshaw Kelly, on behalf of the Council, then introduced the following amendment to the Constitution, Article XIII, Section 2:

Resolved, That Article XIII of the Constitution be amended by adding a new section thereto to be numbered Section 2, reading as follows:

"Section 2. To further aid in carrying out the objects of the Association the House of Delegates at any meeting at any regular or special session thereof may, by a two-thirds vote of the membership thereof present and acting, authorize, empower and direct the Council to cause the formation and organization of one or more corporations under the laws of the state of California with such incorporators, name, purposes, county where the principal office for the transaction of business is to be located, first directors, the total number of shares, the aggregate par value, if any, of all shares, classes of shares, par value of any shares having par value, statement of the provisions, privileges and restrictions granted or imposed upon the respective classes of shares, or if the corporation be formed without capital stock, the authorized number and qualifications of its voting and other rights of each class of members and the liability of each and all classes, to dues or assessments, and with such further provisions in the articles of incorporation thereof and with such by-laws as the Council shall prescribe, fix and determine; and the House of Delegates at any meeting of any regular or special session thereof may by a vote of two-thirds of the members thereof present and acting, authorize, empower and direct the Council to grant, assign, transfer, convey or deliver or cause to be granted, assigned, transferred, conveyed or delivered to any of such corporations upon the formation thereof or to applicants for health and accident or other insurance in or from any of said corporations at or prior to the formation thereof without any consideration therefor, such funds and property, real or personal, of this Association as the House of Delegates shall from time to time authorize or ratify."

The Speaker stated that the amendment to the Constitution would be acted on at the next annual session in 1935.

XVIII. *Adoption of Minutes.*—The minutes of the meeting were then approved.

XIX. *Adjournment.*—There being no further business the meeting adjourned to meet at 8 p. m., Wednesday, May 2, 1934.

EDWARD M. PALLETTE, *Speaker*.
EMMA W. POPE, *Secretary*.

Second Meeting of the House of Delegates at the Sixty-Third Annual Session

Held in the Music Room, Mission Inn, Riverside, California, Wednesday, May 2, 1934, at 8 p. m.

I. *Call to Order.*—The meeting was called to order by the Speaker, Edward M. Pallette of Los Angeles.

II. *Roll Call.*—The secretary called the roll. One hundred and twenty-five out of the total one hundred and thirty-seven members of the House of Delegates, consisting of officers, delegates, and alternates, were seated and the Speaker declared a quorum present. Twelve members were absent.

III. *Announcement of Place of the 1935 Annual Session.*—The Speaker announced that the Yosemite National Park had been selected as the place of the 1935 annual session and that the date would be fixed by the Executive Committee at a later meeting.

IV. *Election of Officers:*

1. *President-Elect.*—The Speaker stated that the next order of business would be the election of officers, and nominations were in order for president-elect.

T. Henshaw Kelly of San Francisco nominated Robert A. Peers of Colfax as president-elect; such nomination was seconded by A. J. Scott of Los Angeles.

Junius B. Harris of Sacramento moved that the nominations be closed and that the secretary be instructed to cast the ballot for Robert A. Peers; such motion was seconded by Henry J. Ullmann of Santa Barbara, and unanimously carried.

The secretary cast the unanimous ballot of the House for Robert A. Peers, and the Speaker announced the election of Robert A. Peers as president-elect for the ensuing year. On request of the Speaker, T. Henshaw Kelly and Junius B. Harris escorted President-Elect Peers to the platform. Doctor Peers thanked the House for the honor conferred on him.

2. Speaker of the House of Delegates.—At this point the Vice-Speaker, John H. Graves of San Francisco, took the chair and announced that the next order of business would be the election of a Speaker for the ensuing year.

Karl L. Schaupp of San Francisco nominated Edward M. Pallette of Los Angeles as Speaker of the House; such nomination was seconded by Morton R. Gibbons of San Francisco. Charles A. Dukes of Oakland moved that the nomination be closed and the secretary be instructed to cast the ballot; such motion was seconded by Irving Ingber of San Francisco, and unanimously carried.

The secretary cast the unanimous ballot of the House for Edward M. Pallette, and the vice-speaker announced the election of Edward M. Pallette as Speaker of the House of Delegates for the ensuing year. Doctor Pallette then took the chair.

3. Vice-Speaker of the House of Delegates.—The Speaker announced that the next order of business would be the election of the vice-speaker.

Ruggles A. Cushman of Talmage nominated John H. Graves of San Francisco as vice-speaker of the House of Delegates; such nomination was seconded by A. J. Scott of Los Angeles. William H. Kiger of Los Angeles moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by Charles A. Dukes of Oakland, and carried.

The secretary cast the unanimous ballot of the House for John H. Graves, and the Speaker announced the election of John H. Graves as vice-speaker of the House of Delegates for the ensuing year.

4. Election of Councilors.—The Speaker stated that the next order of business would be the election of councilors for the third, sixth, and ninth districts.

(a) Third District.—The Speaker announced that Henry J. Ullmann had been nominated as councilor for the Third District on written nomination filed with the secretary, signed by G. C. Coffey, Ventura; Hugh Freidell, Santa Barbara; Richard D. Evans, Santa Barbara; G. L. Sobey, Paso Robles; A. T. Gage, Redlands; C. A. Whitmer, Colton; and Fred B. Moor, Loma Linda. Louis A. Packard of Bakersfield seconded the nomination. T. Henshaw Kelly moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded, and carried.

The secretary cast the unanimous ballot of the House for Doctor Ullmann, and the Speaker announced the election of Henry J. Ullmann as councilor for the Third District for the term of three years.

(b) Sixth District.—The Speaker announced that a written notification, signed by Alson R. Kilgore and Irving S. Ingber, stated that the San Francisco delegation in caucus assembled had unanimously nominated Karl L. Schaupp of San Francisco as councilor for the Sixth District. Charles T. Sturgeon of Los Angeles seconded the nomination. Philip Gilman of San Francisco moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by LeRoy Brooks of San Francisco, and carried.

The secretary cast the unanimous ballot of the House for Doctor Schaupp, and the Speaker announced the election of Karl L. Schaupp as councilor for the Sixth District for a term of three years.

(c) Ninth District.—The Speaker announced that Henry S. Rogers had been nominated as councilor of the Ninth District on written nomination filed with the secretary, signed by Fred O. Butler of Sonoma and George M. Landrock of Marin. Junius B. Harris of Sacramento seconded the nomination. T. Henshaw Kelly of San Francisco moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by Langley Porter of San Francisco, and carried.

The secretary cast the unanimous ballot of the House for Doctor Rogers, and the Speaker announced the election of Henry S. Rogers as councilor for the Ninth District for a term of three years.

5. Councilors-at-Large.—The Speaker announced that the next order of business would be the election of three councilors-at-large, one to fill the unexpired term of the late Dr. George G. Hunter, which through councilor appointment is now being held by Harry H. Wilson of Los Angeles; the second, caused by the expiration of the term of William H. Kiger of Los Angeles; and the third, caused by the expiration of the term of Junius B. Harris of Sacramento.

(a) William R. Molony of Los Angeles nominated Harry H. Wilson of Los Angeles as councilor at large for a term expiring 1935; such nomination was seconded by Irving S. Ingber. Carl R. Howson of Los Angeles moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by A. J. Scott of Los Angeles.

The secretary cast the unanimous ballot of the House for Doctor Wilson and the Speaker announced the election of Harry H. Wilson as councilor at large from Los Angeles for a term expiring in 1935.

(b) Philip Stephens of Los Angeles nominated William H. Kiger of Los Angeles as councilor at large to succeed himself for a term of three years; such nomination was seconded by Oscar Reiss. George A. Hare of Fresno moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by LeRoy Brooks of San Francisco.

The secretary cast the unanimous ballot of the House for Doctor Kiger and the Speaker announced the election of William H. Kiger as councilor at large from Los Angeles for a term of three years expiring 1937.

(c) T. Henshaw Kelly nominated Junius B. Harris of Sacramento as councilor at large to succeed himself for a term of three years; such nomination was seconded by George I. Dawson of Napa. Langley Porter of San Francisco moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by Irving Ingber of San Francisco.

The secretary cast the unanimous ballot of the House for Doctor Harris and the Speaker announced the election of Junius B. Harris as councilor at large for a term of three years, expiring 1937.

* * *

V. Election of Delegates and Alternates to the American Medical Association.—The Speaker stated that the next order of business would be the election of delegates to the American Medical Association House of Delegates for the sessions of 1935 and 1936, to fill vacancies caused by the expiration of the terms of Charles A. Dukes, Carl R. Howson, Junius B. Harris and Harry H. Wilson.

1. Delegates.—**(a)** T. C. Lawson of Oakland nominated Charles A. Dukes of Oakland as delegate to the American Medical Association for the sessions of 1935 and 1936; such nomination was seconded by Eric Liljencrantz of Oakland. Irving Ingber of San Francisco moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded and carried.

The secretary cast the unanimous ballot of the House and the Speaker announced the election of Charles A. Dukes of Oakland to succeed himself as delegate to the American Medical Association House of Delegates for the sessions of 1935 and 1936.

(b) William H. Kiger of Los Angeles nominated Clarence G. Toland of Los Angeles as delegate to the American Medical Association for the sessions of 1935 and 1936; such nomination was seconded by Irving Ingber of San Francisco. T. Henshaw Kelly of San Francisco moved that the nomination be closed and the secretary be instructed to cast the ballot; such motion was seconded by LeRoy Brooks of San Francisco and carried.

The secretary cast the unanimous ballot of the House and the Speaker announced the election of Clarence G. Toland of Los Angeles to succeed Carl R. Howson as delegate to the American Medical Association House of Delegates for the sessions of 1935 and 1936.

(c) Charles A. Dukes of Oakland nominated Junius B. Harris of Sacramento as delegate to the American Medical Association for the sessions of 1935 and 1936; such nomination was seconded by William H. Kiger of Los Angeles. Langley Porter of San Francisco moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded and carried.

The secretary cast the unanimous ballot of the House and the Speaker announced the election of Junius B. Harris of Sacramento to succeed himself as delegate to the American Medical Association House of Delegates for the sessions of 1935 and 1936.

(d) Harry H. Wilson of Los Angeles nominated William R. Molony, Sr. of Los Angeles as delegate to the American Medical Association for the sessions of 1935 and 1936; such motion was seconded by Charles T. Sturgeon of Los Angeles. A. J. Scott of Los Angeles moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by George Dock of Los Angeles and carried.

The secretary cast the unanimous ballot of the House and the Speaker announced the election of William R. Molony, Sr., of Los Angeles to succeed himself as delegate to the American Medical Association House of Delegates for the sessions of 1935 and 1936.

2. *Alternates.*—The Speaker stated that nominations were in order for alternates to the American Medical Association for the sessions of 1935 and 1936 to fill vacancies caused by the expiration of the terms of Edward N. Ewer, Edward M. Palette, John Hunt Shephard and John C. Ruddock.

(a) T. C. Lawson of Oakland nominated Edward N. Ewer of Oakland as alternate to Charles A. Dukes for the American Medical Association sessions of 1935 and 1936; such nomination was seconded by Charles A. Dukes. T. Henshaw Kelly of San Francisco moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded, and carried.

The secretary cast the ballot and the Speaker announced the election of Edward N. Ewer as alternate to Charles A. Dukes for the American Medical Association sessions of 1935 and 1936.

(b) John Hunt Shephard of San Jose nominated Edward M. Palette of Los Angeles as alternate to Clarence G. Toland of Los Angeles for the American Medical Association sessions of 1935 and 1936; such nomination was seconded by LeRoy Brooks of San Francisco. T. Henshaw Kelly of San Francisco moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded, and carried.

The secretary cast the ballot and the Speaker announced the election of Edward M. Palette as alternate to Clarence G. Toland for the American Medical Association sessions of 1935 and 1936.

(c) R. Stanley Kneeshaw of San Jose nominated John Hunt Shephard of San Jose as alternate to Junius B. Harris for the American Medical Association sessions of 1935 and 1936; such nomination was seconded by Alfred L. Phillips of Santa Cruz. Oscar Reiss of Los Angeles moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was duly seconded, and carried.

The secretary cast the ballot and the Speaker announced the election of John Hunt Shephard of San Jose as alternate to Junius B. Harris for the American Medical Association sessions of 1935 and 1936.

(d) E. Earl Moody of Los Angeles nominated John C. Ruddock of Los Angeles as alternate to William R. Molony, Sr., for the American Medical Association sessions of 1935 and 1936; such motion was seconded by Orrie Ghrist of Los Angeles. Leo J. Madsen of Los Angeles moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by John Dunlop of Los Angeles, and carried.

The secretary cast the ballot, and the Speaker announced the election of John C. Ruddock as alternate to William R. Molony, Sr., for the American Medical Association sessions of 1935 and 1936.

* * *

VI. *Standing Committees.*—At the request of the Speaker, the secretary read the membership of the Standing Committees of the Association as recommended by the Council for approval by the House of Delegates, as follows:

Committee on Associated Societies and Technical Groups.

William W. Roblee (Chairman).....	Riverside	1937
Clifford Sweet.....	Oakland	1935
William H. Geistweit.....	San Diego	1936

Committee on Extension Lectures.

Robert T. Legge (Chairman).....	Berkeley	1937
James F. Churchill.....	San Diego	1935
J. Homer Woolsey.....	Woodland	1936
Secretary ex officio.		

Committee on Health and Public Instruction.

Fred B. Clarke (Chairman).....	Long Beach	1935
W. R. P. Clark.....	San Francisco	1936
Benjamin W. Black.....	Oakland	1937

Committee on Hospitals, Dispensaries and Clinics.

Daniel Crosby (Chairman).....	Oakland	1936
John C. Ruddock.....	Los Angeles	1935
Karl L. Schaupp.....	San Francisco	1937

Committee on History and Obituaries.

George D. Lyman (Chairman).....	San Francisco	1937
Charles D. Ball.....	Santa Ana	1935
J. Marion Read.....	San Francisco	1936
Secretary ex officio.		
Editor ex officio.		

Committee on Industrial Practice.

Morton R. Gibbons (Chairman).....	San Francisco	1935
Mott H. Arnold.....	San Diego	1936
Harry E. Zaiser.....	Orange	1937

Committee on Medical Defense.

George G. Reinle (Chairman).....	Oakland	1935
Fred R. DeLappe.....	Modesto	1936
John P. Nuttall.....	Santa Monica	1937

Committee on Medical Economics.

John H. Graves (Chairman).....	San Francisco	1935
William R. Molony, Sr.....	Los Angeles	1936
Willard Stone.....	Pasadena	1937

Committee on Medical Education and Medical Institutions.

Loren R. Chandler (Chairman).....	San Francisco	1936
George Dock.....	Pasadena	1935
John B. Doyle.....	Los Angeles	1937

Committee on Membership and Organization.

Harry H. Wilson (Chairman).....	Los Angeles	1935
Dewey R. Powell.....	Stockton	1936
Thomas H. McGavack.....	San Francisco	1937
Secretary ex officio.		

Committee on Publications.

Percy T. Magan (Chairman).....	Los Angeles	1937
Ruggles A. Cushman.....	Talmage	1935
Frederick F. Gundrum.....	Sacramento	1936
Secretary ex officio.		
Editor ex officio.		

Committee on Public Policy and Legislation.

Junius B. Harris (Chairman).....	Sacramento	1935
Fred R. DeLappe.....	Modesto	1936
E. T. Remmen.....	Glendale	1937
President ex officio.		
President-elect ex officio.		

Committee on Scientific Work.

J. Homer Woolsey.....	Woodland	1935
F. M. Pottenger.....	Monrovia	1936
Lemuel P. Adams.....	Oakland	1937
Secretary Section on General Medicine.		
Secretary Section on General Surgery.		
Emma W. Pope, ex officio, Chairman.		

Alson R. Kilgore of San Francisco moved that the membership of the standing committees as read, be approved; such motion was seconded by Loren R. Chandler of San Francisco and carried.

* * *

VII. Resolution on Death of William H. Welch.—Philip Gilman of San Francisco presented the following resolution of regret, which was unanimously adopted by a rising vote of the House of Delegates:

The California Medical Association assembled in meeting at Riverside learns with infinite regret of the death of Dr. William H. Welch.

Many of its members are personal students of Doctor Welch and all wish to express their sorrow at his passing but rejoice in the knowledge of the wonderful fullness of the life which has closed—a life that leaves so lasting an impression on medical education and discovery, not only in this country but in the entire world.

* * *

VIII. Report of the Reference Committee on Reports of Officers and Standing Committees.—At the request of the Speaker, Alson R. Kilgore of San Francisco, chairman of the Committee on Reports of Officers and Standing Committees, presented the report of his committee, which was acted on section by section. The report as submitted read as follows:

Report of Reference Committee on Reports of Officers and Standing Committees

PRESIDENT'S ADDRESS

Our retiring president has reviewed for us in his address a year of intensive activity, fraught with momentous import to organized medicine. The Association owes a debt of appreciation to the man who has so earnestly and at such personal sacrifice served our interests; a debt which can only be repaid in the satisfaction he will take from seeing this organization carry to successful consummation under succeeding administrations projects begun and projects carried on during his term this past year. We extend this expression of our appreciation to him and in the same breath pledge our loyalty to his successor.

Certain specific recommendations are made in the president's address:

1. With regard to health insurance, the president recommends that the Association set up a voluntary plan covering hospital care. This matter will come before the House in specific resolutions for action.
2. The president recommends that efforts be made to spread the system of control of county hospitals by the County Institutions Commission system. This matter will be mentioned under the report of the Department of Public Relations.
3. The president recommends that the program of publicity started by the Department of Public Relations be continued. In this recommendation your committee concurs.
4. The president recommends that owing to the rapidity of change of present conditions and the urgency of many problems constantly arising, the Executive Committee return to the plan of holding monthly meetings. In this recommendation your committee concurs.
5. The president recommends that the survey studies carried out by the Cancer Commission during the past three years be collected in reprint form and made available to the members of the Association. Your committee concurs in this recommendation.

REPORTS OF THE GENERAL OFFICERS

The reports of the general officers, the president, the president-elect, the Speaker of the House of Delegates, the secretary-treasurer, and the editor have been reviewed by your committee, as well as the reports of the Auditing Committee and the trustees, and the standing committees of this Association, namely, the Committees on

- Associated Societies and Technical Groups,
- Extension Lectures,
- Health and Public Instruction,
- History and Obituaries,

- Hospitals, Dispensaries and Clinics,
- Medical Defense,
- Medical Education and Medical Institutions,
- Publications,
- Scientific Work.

These reports outline in the briefest possible form an enormous volume of time and energy consuming work generously given in the interests of organized medicine. Your committee finds no matters of policy in connection with these reports upon which it believes the House of Delegates should make particular recommendations. Your committee suggests that the House of Delegates accept these reports and extend its thanks to the officers and committee members. It is a matter of special congratulation that the affairs of this organization have been handled from a business point of view so as to close the year with the Association in the financial condition disclosed by the treasurer's report.

We note in the report of the Committee on History and Obituaries a request that the sum of \$300 be appropriated for the use of this committee in securing historical data and material which the passage of time may make unavailable at any price.

In these times of economic stress we believe that the traditions and backgrounds of medicine become more rather than less important and, therefore, without specifying any given amount of money, your committee recommends that the House of Delegates authorize the Council to appropriate on the request of the Committee on History and Obituaries specific amounts not to exceed \$300 where it appears urgent that specific historical material be secured without delay.

REPORT OF THE COUNCIL

Your committee recommends that the House of Delegates specifically approve the action of the Council in coöperating with the Board of Medical Examiners in the conduct of legal proceedings looking toward a clarification of the law with regard to corporate practice of medicine, and further approve of the action of the Council in coöperating with constituted authorities of the state and counties in the prosecution of individuals and corporations engaged in pernicious practices in this regard.

Resolutions introduced by the Council covering these activities have been referred to Reference Committee No. 2 and will be dealt with in that committee's report.

Your committee recommends that the House of Delegates specifically approve the actions of the Council in rendering aid and assistance to various component county societies in the development of public relations, and where necessary in the conduct of legal proceedings directed to correction of the abuses of extension of county hospital service to persons not properly or legally entitled thereto.

The resolution introduced by the Council covering further participation in this and similar activities has been referred to Reference Committee No. 2 and will be dealt with in that committee's report.

HEALTH INSURANCE LEGISLATION

With regard to that part of the Council's report dealing with possible health insurance legislation in California, we feel that there is ample evidence of public demand not only voiced by the "vocal groups" from outside the state mentioned in the report of the Council, but also in the obvious fact of extensive purchase by the public of inferior services now offered along the line of distributing sickness costs by periodic payments. It may be true that the plans now operating in other countries would not be suitable in America, nevertheless it is entirely possible that a sufficient demand may make inevitable some system of some kind here.

We agree with the Council that legislative establishment of health insurance in California would be undesirable at this time from the standpoint of the public and the profession; but we earnestly believe that if such legislation appears inevitable to satisfy the economic demand of the times, the California Medical Association should be prepared to coöperate

in moulding this legislation in such manner as to preserve as nearly as may be the standards of scientific service and of professional relations which are of such vital importance to the community. We commend the Council's recommendation that studies in preparation for such action be continued. Your committee would go still further and recommend that these studies be pushed with all possible speed.

HOSPITALIZATION PLANS

In its report the Council recommends the establishment by the California Medical Association of an insurance organization to offer to the community a means of solving in part at least the problem of distribution of unequal sickness costs. The specific recommendations are embodied in a resolution referred to Reference Committee No. 2 and your present committee does not offer recommendation regarding this part of the Council's report for action prior to the report of Reference Committee No. 2 upon this resolution.

We cannot, however, refrain from an endorsement of the fundamental principle contained in the report of the Council.

We believe that perhaps the most effective means of avoiding ill-advised legislative establishment of health insurance is to offer to the community a solution of the problem on our own initiative.

We believe that there are two definite lines of activity in which this Association should now engage—(1) offer the community a solution of the problem in the form of a voluntary payment plan set up by this Association, (2) as recommended by the Council, adequately prepare to coöperate in the preparation of legislation, if such becomes inevitable, establishing a compulsory payment plan. We believe it is feasible so to set up a voluntary plan to be operated by this Association that it would later fit into a compulsory payment plan which may be established by legislative enactment.

EMERGENCY RELIEF PLANS

Again the recommendations of the Council are embodied in a resolution referred to Reference Committee No. 2 and your present committee offers no specific recommendations to be voted upon now.

ANNUAL ASSESSMENT

Your committee recommends that in accordance with the suggestion of the Council the dues for 1935 be set at \$10.

REPORT OF COMMITTEE ON SURVEY OF EXPENDITURES

Your committee recommends that the House of Delegates approve this report, and in particular approve: (1) the recommendation for increases of clerical salaries amounting to \$45 per month; (2) the proposal to increase the budget item of \$2,191.20 for the Committee on Public Policy and Legislation to \$2,500, and realizing the importance of this committee's work to the Association, recommend that the Council be authorized to still further increase this budget allowance if additional expenditures during the year become necessary for the effective accomplishment of this committee's work; (3) that executive salary contracts be placed on a monthly basis.

With the changes noted, your committee recommends the adoption of the proposed budget for 1935.

REPORT OF THE GENERAL COUNSEL

This report concentrates in fifteen pages a record of activities and a summary of conclusions obviously based on an unprecedented volume of work involving complex and burdensome detail and carried out under extraordinary pressure. Your committee recommends that the House of Delegates formally express the appreciation of the Association for this service. The important activities discussed in this report have already been set forth in recommendations contained in the report of the Council and do not require separate action by the House of Delegates. We recommend the adoption of the report as read.

REPORT OF THE DEPARTMENT OF PUBLIC RELATIONS

The department, its chairman and director, have been concerned with many difficult aspects of the relations of organized medicine to the community. Some of its work has yielded tangible results—as in case of the laborious working out of details of a hospitalization plan for a county society. Other aspects of the department's work, such as newspaper publicity, the promotion of county institution commission systems, etc., are either of such nature that tangible results cannot be measured or have not yet reached a stage of development in which tangible results can properly be expected. These lines of work are none the less of great value to the Association.

Your committee particularly concurs in the recommendation of the president that the Department of Public Relations continue to exert its best efforts toward the extension of the County Institution Commission system. It appears likely that the immediate future may make some efforts in this direction particularly timely.

Your committee recommends the acceptance of this report with the thanks of the Association.

REPORT OF THE CANCER COMMISSION

Your committee recommends the acceptance of this report as presented. The matter of reprinting the collected studies of the Cancer Commission has already been dealt with in the report of the president.

ALSON R. KILGORE,
E. ERIC LARSON,
PHILIP H. STEPHENS.

Alson R. Kilgore then moved for the adoption of the report as a whole. Such motion was seconded by T. Henshaw Kelly and carried.

* * *

IX. Redistricting of Districts One and Three.—It was pointed out that the recommendation of the Council on redistricting the first and third districts had not been acted upon by the Reference Committee and the House.

On motion of A. T. Gage of San Bernardino, seconded by Junius B. Harris of Sacramento, San Bernardino County was removed from the Third Councilor District and placed in the First Councilor District.

* * *

X. Report of the Reference Committee on Resolutions and New and Miscellaneous Business.—William R. Molony, chairman of the Committee on Resolutions and New and Miscellaneous Business then presented the report of his committee, which was acted on section by section.

To the Speaker and the House of Delegates:

Your Reference Committee No. 2 begs leave to submit the following report:

† † †

Resolution No. 1, Coöperation with the Board of Medical Examiners.—(Amended to read):

Resolved, That the House of Delegates of the California Medical Association instruct the Council of the California Medical Association to coöperate with the Board of Medical Examiners in its efforts toward stopping the illegal practice of medicine by persons and corporations in the state of California.

Doctor Molony then moved the adoption of the foregoing resolution; such motion was seconded by LeRoy Brooks of San Francisco and carried.

† † †

Resolution No. 2, Coöperation with District Attorneys.—(Amended by Reference Committee No. 2 to read):

Resolved, That the component county medical societies of the California Medical Association be requested to coöperate with and aid the district attorneys of the respective counties in the enforcement of the laws governing the practice of medicine.

Doctor Molony then moved the adoption of the foregoing resolution; such motion was seconded by Irving Ingber of San Francisco and carried.

Resolution No. 3, Use of County Hospitals.—(Amended by Reference Committee No. 2 to read):

WHEREAS, There has been and there is a determined effort on the part of persons within the state of California to open the doors of county hospitals and render services to persons not of the indigent class; and

WHEREAS, Many privately owned and taxpaying hospitals have been developed in California to care for the non-indigent sick and have investments in their plants and service organization that will be seriously injured or possibly lost by unfair competition with county hospitals as above referred to; and

WHEREAS, Such use of county hospitals will add greatly to the tax burden of the respective counties; therefore be it

Resolved, That the Council of the California Medical Association be instructed to use such efforts and resources of the Association as it may deem proper to the end that county hospitals be maintained and conducted within the limits as prescribed by law.

Doctor Molony then moved for the adoption of the foregoing resolution; such motion was seconded by Henry Rogers of Petaluma and carried.

Amendment to the By-Laws, Chapter XIII.—At this point Doctor Molony stated that the next Resolution No. 4 dealt with the proposed hospitalization plan and in order to make it effective, if it were passed by the House, the proposed amendment to the By-Laws should first be passed on.

Doctor Molony then read the following amendment to Chapter XIII of the By-Laws:

Resolved, That the By-Laws be amended by adding thereto a new chapter to be Number XIII, reading as follows:

Chapter XIII. Corporations. To further aid in carrying out the objects of the Association, the House of Delegates at any meeting at any regular or special session thereof, may by a two-thirds vote of the membership thereof present and acting, authorize, empower and direct the Council to cause the formation and organization of one or more corporations under the laws of the state of California with such incorporators, name, purposes, county where the principal office for the transaction of business is to be located, first directors, the total number of shares, the aggregate par value if any of all shares, classes of shares, par value of any shares having par value, statement of the provisions, privileges and restrictions granted or imposed upon the respective classes of shares, or if the corporation be formed without capital stock, the authorized number of qualifications of its members, the different classes of members, if any, the property, voting and other rights of each class of members and the liability of each and all classes, to dues or assessments, and with such further provisions in the articles of incorporation thereof and with such by-laws as the Council shall prescribe, fix and determine; and the House of Delegates at any meeting of any regular or special session thereof may by a vote of two-thirds of the members thereof present and acting, authorize, empower and direct the Council to grant, assign, transfer, convey or deliver or cause to be granted, assigned, transferred, conveyed or delivered to any of such corporations upon the formation thereof or to applicants for health and accident or other insurance in or from any of said corporations at or prior to the formation thereof without any consideration therefor, such funds and property, real or personal, of this Association as the House of Delegates shall from time to time authorize or ratify."

Discussion of the proposed by-law was then had by members of the House. T. Henshaw Kelly explained that the proposed amendment to the By-Laws was enabling legislation, which would permit the House of Delegates, by a two-thirds vote, to establish, under the direction of the Council, one or more corporations, and that this legislation would permit the establishment of any type of corporation agreed upon by a two-thirds vote of the House and would be of use at any future time, and that its adoption did not in any

way carry with it the approval of any specific hospital or medical service plan; but that no type of organization could be formed now or in the future without first adopting such enabling legislation as would be established by the proposed by-law.

Loren R. Chandler then moved that a recess of ten minutes be given to permit a caucus of the San Francisco delegation; such motion was seconded by Alson Kilgore of San Francisco. The Speaker asked the pleasure of the House on the matter, and it was unanimously agreed that a recess of three minutes be allowed. A recess was then taken.

The Speaker called the House to order after the recess, and discussion was resumed on the proposed amendment to the By-Laws.

The Speaker called for a vote *viva voce*, and the amendment to the By-Laws by the addition of a new chapter, numbered XIII, was unanimously adopted by the House.

Resolution No. 4, Hospitalization Plan.

WHEREAS, It is desirable and possible for this Association, the California Medical Association, to establish a plan and method of reducing the cost of illness and injury by causing the organization of an insurance corporation under the laws of the state of California to provide hospital service on a periodic payment basis, and to defray the cost of necessary anesthetic, laboratory and limited x-ray services to patients while hospitalized; and

WHEREAS, Such a corporation can and should be formed in full cooperation with ethical accredited hospitals; and

WHEREAS, The inauguration of such service will constitute a truly progressive solution of many vexatious economic problems affecting the public welfare, and can be instituted without state aid, increase of taxes, or injurious results to the public health or scientific medicine; now, therefore, be it

Resolved, That the Council of the California Medical Association be, and it is hereby authorized and empowered to cause the organization of an insurance corporation under the laws of the state of California, to provide hospital service, and if the Council so determines, to defray the cost of said limited medical service to patients while hospitalized, without capital stock and with such incorporators, name, additional purposes, county where the principal office for the transaction of business is to be located, first directors, authorized number and qualifications of members, classes of membership, property, voting and other rights and privileges of each class of membership, liability of each and all classes to dues and assessments, and other provisions of its Articles of Incorporation, and By-Laws, as the Council shall prescribe, fix and determine; and be it further

Resolved, That there is hereby appropriated for the purpose hereof such sums and securities of this Association, whether held by the Association or by Trustees Of The California Medical Association, not exceeding the amount or value of \$35,000, as the Council may deem advisable or necessary to expend in carrying out the provisions hereof; and be it further

Resolved, That the Council is hereby authorized and empowered to take all such steps and proceedings, and to do any and all acts or things necessary in the name of this Association or otherwise, to carry this resolution into effect.

Mimeographed copies explaining the hospital insurance plan proposed by the Council were distributed to the members of the House of Delegates and the following explanatory statement and the foregoing resolution were read by Doctor Molony.

Explanatory note on health insurance plan submitted by Council:

The hospital insurance plan recommended by the Council in its report, proposes the formation of a health and accident insurance corporation on the assessment plan under the laws of California with two classes of members: (1) beneficiaries; and (2) administrative, with voting rights, who would be mem-

bers of the Association elected by the Council from the membership at large and from the various districts of the state. If desired, a limited voting right can be given the beneficiaries.

The By-Laws would provide for the election of a majority of directors from the voting members and a minority of the board from nominees of participating hospitals (hospitals contracting with the corporation to furnish hospital service). The officers would be composed of the directors and others, selected for insurance or hospital experience, giving proper representation to the participating hospitals.

The corporation would furnish hospitalization throughout the state by districts (the territorial areas of one or more county societies), with district administrative boards composed in like manner of physicians and hospital representatives, and the service would be established by districts thus permitting orderly development of proper personnel. The major portion of the capital required (\$25,000 minimum being necessary to comply with this insurance law), would be furnished by the California Medical Association but each district would contribute to the working capital reasonable pro rata amounts according to probable business obtainable.

The hospital service would be furnished in each district by the participating hospital of the district. Such service would be paid for by the corporation on a hospital day basis and would not include the services of any physicians. The corporation would, however, if the Council so determine, agree to defray the cost of necessary anesthetic and limited diagnostic laboratory and roentgenological services (and no other medical or surgical services), rendered the beneficiary while hospitalized only, by paying the beneficiary and in no case, the hospital, not to exceed certain maximum sums therefor, after receipt of satisfactory proof of the payment of said fees to his physician or physicians by the beneficiary; thus the beneficiary will be responsible for all his bills for professional services.

The corporation would establish its own district medical staffs, membership in which would be open to every member of the county society or societies of the district agreeing to staff rules; and a beneficiary would be entitled to hospitalization in a participating hospital only if so certified by the physician of his choice, viz., a staff member with the approval of an assistant medical director of the corporation.

Hospitals will continue to have the right through their own medical staffs to exclude staff members from their hospitals for cause.

Formation of such a corporation contemplates the establishment of the office of the corporation at the offices of the California Medical Association at San Francisco, the employment as general manager of a skilled and experienced insurance executive with an assistant secretary in each district and such other personnel as may be necessary.

It is believed that beneficiary memberships can be sold through the interested efforts of the coöperating hospitals and the physicians, leaving to the general manager in the first instance the matter of interesting large employers.

While the corporation would have the relation above defined to the California Medical Association and its component societies and to that extent a status of agency would be established, both the beneficiary certificate and the hospital contract would be drawn to constitute corporate obligations only, with all recourse against members, directors, officers, the California Medical Association and its component societies waived by the beneficiary and the hospital. It is believed that no objection to such a provision in the beneficiary certificate will be made by the state departments. Furthermore, the Standard Provisions Act gives the right of cancellation with refund of current premium at any time. The Council will not proceed with the plan if authorized, under conditions which would, in the opinion of the legal department, involve any liability on the part of the Association or its membership beyond the amount authorized by the resolution.

Discussion on Resolution No. 4:

Doctor Molony then moved the adoption of the above resolution on hospitalization; such motion was seconded by Edward N. Ewer of Oakland.

Full discussion was then had. John Hunt Shephard of San Jose spoke in opposition to the plan proposed in the resolution, and suggested the appointment of a committee to study the matter, with power to act.

Dr. Edward Ewer of Oakland spoke in favor of the hospitalization plan recommended by the Council.

Dr. Rodney Yoell of San Francisco then addressed the House in opposition to the plan of the Council stating that any plan to be effective must contain a compulsory insurance feature.

Doctors T. Henshaw Kelly, Karl L. Schaupp and Junius B. Harris spoke in favor of the Council's plan for hospitalization.

Doctors LeRoy Brooks, Langley Porter, Robert S. Stone and Wilber Swett spoke in opposition to Resolution No. 4 and favored compulsory plans or more inclusive ones.

Doctors Junius B. Harris and Louis Packard pointed out the necessity of action by the society to meet problems contemplated in the coming legislature.

Doctor E. M. Burns of Los Angeles stated that he was not convinced of the necessity of any of these plans.

The Speaker then stated that a vote would be taken at this time on Resolution No. 4.

A vote by roll call was taken. Sixty-five affirmative votes were cast and fifty-three negative votes; seven members not voting. The Speaker then declared that the necessary two-thirds vote not having been obtained, the motion for adoption of Resolution No. 4 was defeated.

Resolution No. 8, Health Insurance Committee.

Doctor Molony then read the substitute resolution recommended by Reference Committee No. 2 instead of Resolution No. 8 as originally introduced, which resolution read as follows:

WHEREAS, There is already in existence a committee of the Council appointed for the specific purpose of making a survey and study of the health insurance problem in the state of California and in order to bring to this study an enlarged viewpoint; therefore, be it

Resolved, That the Council of the California Medical Association be instructed to reorganize this committee for the continuance of the above named purpose and to include three members of the House of Delegates to be appointed by the Speaker and this committee submit a report to the meeting of the Council of the California Medical Association on May 26, 1934; and be it further

Resolved, That the Council be and is hereby authorized to expend such sums of money as may be deemed necessary by the Council for the purpose of the work of this committee.

Doctors Brooks, Ingber, Yoell and other members of the House of Delegates voiced objection to the above resolution stating that it did not embody the essential points of the original Resolution No. 8.

Doctor Loren Chandler then requested that the original Resolution No. 8 be read.

Doctor Molony then read the original Resolution No. 8 as follows:

Resolved, That a committee be, and hereby is constituted, consisting of two members of the Council to be appointed by the chairman of the Council, and three members of the House of Delegates to be appointed by the Speaker of the House, whose duty shall be the consideration of health insurance.

Resolved, That this committee shall be instructed to conduct an adequate study and survey of the problem as it applies to California and to formulate a plan for the administration of health insurance and to prepare a bill for suitable legislation which may be available for presentation in the 1935 session of the California State Legislature.

Resolved, That the Council be, and is hereby instructed, to appropriate funds sufficient to employ adequate and competent technical and legal assistance and advice for the purpose of this committee.

Doctor Molony moved that the foregoing resolution do not pass.

There being no second to this motion, Doctor Molony then moved the adoption of the substitute resolution presented by Reference Committee No. 2, which motion was seconded.

Dr. F. M. Pottenger of Monrovia then moved as a substitute motion the original Resolution No. 8, which motion was seconded and carried.

The Speaker then announced that the question was on the adoption of the original Resolution No. 8. Dr. T. Henshaw Kelly then moved the adoption of the original Resolution No. 8, which motion was duly seconded.

After further discussion was had on both the original and substitute forms of Resolution No. 8, the Speaker called for the vote on the adoption of Resolution No. 8 as originally presented, and without a roll call the resolution was unanimously adopted.

*Resolution No. 5, Federal Emergency Relief.**—As introduced at the first meeting of the House of Delegates, reading:

WHEREAS, There has been considerable delay in the development of medical care under the Federal Emergency Relief plans because of the lack of any coördinate agency with sufficient authority to act in the medical field, and

WHEREAS, The Federal Government has recognized organized medicine as the agency through which the development of this care should come, and

WHEREAS, It is necessary to have an agency in California and in the California Medical Association that can act rapidly and with authority in the development and coördination of plans for medical care of unemployed on relief receiving federal funds; therefore be it

Resolved, That a committee of three be appointed by the Speaker from the membership of the California Medical Association, this committee to study the whole matter of medical care of unemployed on relief under Federal Emergency Relief plans and to take such steps as it deems advisable to develop in California a central medical authority that shall have the power to develop and coördinate such medical care and its auxiliary services in all of the counties of California so that a coherent plan shall be maintained and operated; and be it further

Resolved, That the Council be authorized and empowered to defray the necessary traveling and other expenses of this committee or its agents.

Doctor Moloney then moved the adoption of the foregoing resolution; such motion was seconded by T. Henshaw Kelly of San Francisco and carried.

Resolution No. 6, Basic Science Law.—Amended to read as follows:

WHEREAS, Every practitioner of the healing art, to whom a citizen may come for diagnosis and treatment of an illness or injury, necessarily has grave responsibilities and because the understanding and treatment of disease demands adequate knowledge, it has long been deemed necessary, by enlightened people, to demand that every person seeking a license to practice the healing art should first possess ample education and training before being permitted to practice. In European nations these educational and training requirements are usually laid down by the federal governments. The Constitution of the United States is such, however, that the licensing of healing art practitioners comes within the domain of state rights and is, therefore, a state function.

In the State of California the citizens have seen fit to provide three separate licensing boards for practitioners of the healing art. The non-sectarian (so-called old school or regular) physicians and surgeons are licensed by the Board of Medical Examiners, through laws by legislative enactment and commencing as far back as 1871. The osteopathic and chiropractic prac-

tioners are licensed by separate boards, through laws enacted by initiative vote of the people.

As regards preliminary education of these groups, the non-sectarian physicians and surgeons, in addition to four years of medical training, must first have possessed a high school diploma and one year of chemistry, biology and physics of collegiate standard. The osteopathic act requires the same. The premedical training required by the Chiropractic Act is of less extent and value.

WHEREAS, It is the duty of the California Medical Association as truly representative of organized modern medicine to educate the citizens of the commonwealth to the value of proper qualification of all who aspire to practice any method or system of the healing art and to guard them against all such persons not so qualified;

WHEREAS, Any legislation seeking to enforce the principle as above stated must be by initiative enactment for the reason that the Osteopathic and Chiropractic Practice Acts are initiative Acts;

WHEREAS, The history of California has seen the formation, growth and influx of many groups comprising thousands of variously and inadequately trained persons who could not be qualified as practitioners had there been an adequate qualifying certificate law in force; therefore be it

Resolved, That the House of Delegates approve the principle of a qualifying certificate act and recommend that the Council of the California Medical Association give the matter of its presentation to the voters of California for adoption, its considered judgment, and if the Council decides to proceed, then to determine whether or not immediate action be taken or a state-wide educational campaign be first undertaken as a preliminary step toward submission of such act at the general election of 1936.

Doctor Molony then moved for the adoption of the resolution; such motion was duly seconded and carried.

Resolution No. 7, Medical Guild.—Doctor Molony submitted the following recommendation in lieu of the original resolution presented at the first meeting of the House of Delegates:

Referring to the resolution presented by Irving S. Ingber, the committee believes that the resolution carries in general a constructive effort to improve the standards of medicine in providing a more effective means of control and discipline of the licentiates under the Medical Practice Act and the lessening of the opportunities of said licentiates to frustrate the action of the board in all disciplinary measures. The Medical Practice Act, enacted in 1913 and amended at practically every legislative session since, and having successfully withstood in the courts all attacks, is now a satisfactory instrument for the licensing, control and discipline of those licensed to practice the healing arts as provided in the Act. In the matter of appeal from the decision of the board in revocation proceeding and extension of causes constituting unprofessional conduct, it is strongly recommended that amendments to these ends be presented to the legislature for enactment.

Doctor Molony then moved for the adoption of the recommendation of the committee; such motion was duly seconded and carried.

Resolution No. 8, Health Insurance Committee.—(See page 446 for action on Resolution No. 8.)

Resolution No. 9, Physicians Appearing on Radio Programs.—(Amended by Reference Committee No. 2 to read as follows):

WHEREAS, The practice of physicians appearing on advertising radio programs under a pseudo scientific pretense is becoming far too prevalent, and

WHEREAS, This practice is subversive of the best interests of the public and the profession, therefore be it

Resolved, That the Council of the California Medical Association establish and recommend to the several component county societies proper rules of professional

* Speaker Pallette has appointed as the Special Committee on Federal Emergency Relief the following: Dr. Harry H. Wilson of Los Angeles, and Dr. T. Henshaw Kelly and Dr. Karl L. Schaupp of San Francisco.

conduct in the premises, the continued violation of which shall constitute grounds for expulsion.

Doctor Molony then moved for the adoption of the foregoing resolution; such motion was seconded by Lemuel P. Adams of Oakland and carried.

Resolution No. 10, Practice of Radiology and Pathology in Hospitals.—(Amended by Reference Committee No. 2 to read as follows and including also text of Resolution No. 11):

Resolved, That the House of Delegates direct the Council of the California Medical Association to appoint a committee of five—a pathologist, radiologist, and three other members of the Council, whose duty it shall be

(a) To contact the Executive Committees of the various western hospital associations in order, singly and/or jointly,

(b) To study the exact relations existing between each and every hospital pathology and radiology department and the pathologist and radiologist in charge thereof,

and to report to the Council.

Doctor Molony then moved the adoption of the foregoing resolution; such motion was seconded by T. Henshaw Kelly of San Francisco and carried.

Resolution No. 11.—Practice of Pathology in Hospitals.—(Resolutions No. 10 and No. 11 were combined by Reference Committee. See Resolution No. 10 for action thereon).

Resolution No. 12, Dual Fee Schedule.—Amended by Reference Committee No. 2 to read as follows:

The House of Delegates of the California Medical Association at the 1933 meeting passed the following resolution:

WHEREAS, There has been for some time much dissatisfaction with the fee schedule authorized by the Industrial Accident Commission for roentgen examinations, partly because some insurance companies have disregarded said schedule, and

WHEREAS, This schedule does not recognize the difference between the taking of x-ray films, including the making of a proper x-ray examination, interpretation and medical consultation and the mere taking of x-ray by a nonradiologist (frequently a general practitioner but in many instances actually a lay person); therefore be it

Resolved, That for the purpose of insurance and industrial accident practice only, the Council and the House of Delegates of the California Medical Association recognize this fundamental difference and that a copy of this resolution be sent to each insurance company writing industrial insurance in the State of California.

This resolution has apparently not proved satisfactory and a resolution has been presented to this House by John Hunt Shepard, M. D., asking that the Council of the California Medical Association be directed to confer with the executive officers of the State Industrial Accident Commission for the purpose of obtaining a more satisfactory ruling as to the x-ray fee schedule.

Your committee recommends the following:

Resolved, That the above request be referred to the Council of the California Medical Association for action.

Doctor Molony then moved the adoption of the recommendation of the committee; such motion was seconded by Le Roy Brooks of San Francisco.

Doctor Shephard stated that the resolution should include the words "for the purpose of eliminating the dual fee schedule." The question was then discussed by various members of the House.

On motion of Karl L. Schaupp, seconded by George A. Hare, the following amendment to the resolution was offered:

"for the purpose of securing the elimination of a dual fee schedule."

The Speaker then called for a vote on the amendment to the resolution, and the majority of the votes

being cast in the negative, the motion for the adoption of the amendment was defeated.

The Speaker then called for a vote on the original recommendation of the committee. The majority of the votes being cast in the affirmative, the resolution was adopted.

Resolution No. 13.—Relationship of Press and Medical Profession.—(Amended by Reference Committee No. 2 to read as follows):

WHEREAS, a closer relationship between the public press and the medical profession is a highly desirable one, and

WHEREAS, Such a relationship is conducive to a more sympathetic understanding by the press and the public of the aims and ideals of the medical profession; therefore be it

Resolved, That the Council of the California Medical Association be requested to take such action through its proper departments as will establish in the component county societies this important and necessary activity.

Doctor Molony then moved the adoption of the foregoing resolution; such motion was seconded by LeRoy Brooks of San Francisco and carried.

* * *

XI. Resolutions of Appreciation.—T. Henshaw Kelly of San Francisco presented the following resolutions of appreciation:

WHEREAS, The 1934 annual session of the California Medical Association at Riverside is about to become another happy landmark in the Association's history; and

WHEREAS, Many persons and agencies, as well as the weather, have contributed to the highly enjoyable meeting; therefore be it

Resolved, That the California Medical Association extend its thanks and grateful appreciation

1. To the invited guests of the Association who have come far and given so freely of their knowledge and companionship during the session;

2. To the Committee on Arrangements for its hard work and careful attention that have done so much for the success of the session and the pleasure of the members and their guests;

3. To the owners and staff of the Mission Inn, who have given of their best for the comfort of their guests;

4. To the Riverside Chamber of Commerce for its kindness in furnishing the use of meeting places, and its arrangements for the convenience and entertainment of those attending the session;

5. To the Riverside Community Opera Association for its delightful performance of Pagliacci for the Association and its guests;

6. To the Riverside Polo Club and the Sherman Institute for their generous contribution to the entertainment of the session;

7. To the press for its coöperation and able presentation of matters dealt with by the meetings;

8. To the commercial exhibitors whose willingness to participate and care in the preparation of their exhibits have done much to make this feature of the session so successful;

9. To the Woman's Auxiliary of the California Medical Association for its presence and generous helpfulness.

Doctor Kelly moved the adoption of the foregoing resolution; such motion was seconded by J. B. Harris and unanimously carried.

* * *

XII. Presentation of the President.—President Clarence G. Toland was then presented to the House by the retiring president, George G. Reinle. Doctor Toland addressed the House, expressing his appreciation of the honor conferred on him.

* * *

XIII. Presentation of the President-elect.—President-elect Robert A. Peers was introduced to the House and expressed his gratitude and sense of responsibility to the Association.

NIV. Adoption of Minutes.—The minutes of the meeting were then adopted as read.

* * *

XV. Adjournment.—There being no further business, the meeting adjourned.

EDWARD M. PALLETTE, *Speaker*.
EMMA W. POPE, *Secretary*.

COUNCIL MINUTES

Minutes of the Two Hundred and Twenty-First Meeting of the Council of the California Medical Association

The following minutes were approved by the Council at its two hundred and twenty-third meeting held at Mission Inn, Riverside, California, Sunday, April 29, 1934.

Held in the offices of the California Medical Association, Room 2004, 450 Sutter Street, San Francisco, Saturday, January 20, 1934, at 9:30 a. m.

Present.—Doctors George G. Reinle, president; Clarence G. Toland, president-elect; Edward M. Pallette, speaker; T. Henshaw Kelly, chairman of the Council; Karl L. Schaupp, chairman of the Executive Committee; and Councilors W. W. Roblee, C. O. Tanner, H. J. Ullmann, Fred R. DeLappe, A. L. Phillips, O. D. Hamlin, C. E. Schoff, M. R. Gibbons, J. B. Harris, H. S. Rogers; C. A. Dukes, chairman of the Committee on Public Relations; Emma W. Pope, secretary; George H. Kress, editor; Walter M. Dickie, director of the Department of Public Relations; and General Counsel Hartley F. Peart. Charles B. Pinkham, secretary of the Board of Medical Examiners, William Molony, president, and Mr. Lionel Browne, Deputy Attorney-General, were present by invitation.

Absent.—Dr. Carl R. Howson.

1. Call to Order.—The meeting was called to order by the chairman, T. Henshaw Kelly.

2. Financial Statement.—Financial statement for the month of December, 1933, was approved as presented by the secretary.

Action by the Council.—On motion of Dukes, seconded by Gibbons and unanimously carried, the following resolution was adopted.

Resolved, That Trustees Of The California Medical Association be requested to pay over to the California Medical Association the interest earned in 1933 on its bonds and funds deposited in savings accounts.

3. Minutes of the Council.—The minutes of the two hundred and twentieth meeting of the Council as mailed to all members were presented, and on motion of Ullmann, seconded by Gibbons, the following resolution was adopted:

Resolved, That the minutes of the two hundred and twentieth meeting of the Council as mailed to all members be approved.

4. Minutes of the Executive Committee.—The minutes of the one hundred and thirty-ninth meeting of the Executive Committee as mailed to all members of the Council were presented, and on motion of Dukes, seconded by Gibbons and unanimously carried, the following resolution was adopted.

Resolved, That the minutes of the one hundred and thirty-ninth meeting of the Executive Committee be approved.

5. Offices of the Association.—The secretary presented a letter from the manager of the Four Fifty Sutter Building outlining three propositions for the consolidation of the main offices of the Association and the offices occupied by the Department of Public Relations.

After discussion, on motion of Reinle, seconded by Dukes and unanimously carried, the following resolution was adopted:

Resolved, That the offer of the Four Fifty Sutter Corporation to terminate the lease of the main office of this Association, and the lease of the office occupied by the Department of Public Relations, and in lieu thereof to lease to this Association the present main office, together with adjoining additional space of three-quarters of a bay, for the term of five years, at the monthly rental of \$274 and upon the remaining

terms and conditions of the existing lease, with option to renew said lease for a further and second period of five years, be accepted; and be it further

Resolved, That the chairman of the Council and the secretary be and they are hereby authorized to execute such cancellations of said existing leases and said new lease in the name and on behalf of this Association.

6. Annual Session.

Action by the Council.—On motion of Ullmann, seconded by Pallette and unanimously carried, the following resolution was adopted:

Resolved, That Doctor Roblee's suggestion that one-half day during the Riverside session be devoted to clinics be approved and that final arrangements for clinics be made by the Program Committee in conference with the Committee on Arrangements.

The secretary stated that acceptances had been received from Dr. Russell Cecil and Dr. Irvine MacQuarrie to address the second general session and take part in special symposia with the Sections of General Medicine and Pediatrics. The president stated that he had received an acceptance from Harvey Agnew, M.D., to address the first general session on Canadian Health Service plans and developments, and that an invitation had been extended to Dr. F. C. Warnshuis, who had telegraphed that other engagements precluded the acceptance of the invitation. Doctor Reinle stated that he planned to invite Louis I. Dublin, Ph. D., of the Metropolitan Life Insurance Company to address the first general session.

It was stated that the Committee on Public Relations would also devote one general meeting to the discussion of medical economics.

7. Corporate Practice.—Further discussion was had of practice of medicine by corporations. The general counsel informed the Council of the opinion dated December 2, 1933, rendered by Attorney-General U. S. Webb, to the Insurance Commissioner, regarding the health and accident contracts of certain hospital associations, and holding such contracts to be health and accident insurance policies, and such business to be health and accident insurance as defined in Subdivision 6 of the Political Code, Section 594, and that such corporations must conform to the requirements of the insurance laws of the state; that he had directed the attention of the insurance department to the inclusion in such contracts of "laboratory service" and "anesthetic" and "x-ray"; that the ruling presented an additional problem in the development of hospital service plans if such proposed activities, notwithstanding their nonprofit and benevolent character, were held to constitute health and accident insurance; that hospital service plans now being formulated by the Alameda County Medical Association, in conjunction with the hospitals of that county, are now nearly completed.

The general counsel stated that he had furnished the secretary with a copy of the complaint of the State Bar in the action brought by it in the Superior Court of Los Angeles against the Security First National Bank of Los Angeles.

The general counsel stated that developments in various parts of the state indicated that a closer contact between the California Medical Association and the staff, management and owners of standard approved hospitals was extremely desirable, and suggested that the Council should give consideration to the best means of affording such a contact.

Action by the Council.—On motion of Kress, seconded by DeLappe and unanimously carried, the following resolution was adopted:

Resolved, That the Department of Public Relations be requested to continue its survey of the hospital activities and be authorized to take such steps in the matter as conditions may indicate and report back to the Council, with power to appoint a subcommittee to be known as a Committee on Hospitals.

8. Budget.—Karl L. Schaupp, chairman of the Executive Committee, presented the budget of the committee, based on the expenses of the Association, for the year 1933. Final approval of the budget was postponed until the meeting of the Council at the annual session to permit a detailed survey of activities.

9. Committee on Survey of Expenditures and Activities of the Association.—Doctor Roblee brought up the question of activities of the Association.

Action by the Council.—On motion of Roblee, seconded by Kiger and unanimously carried, the following resolution was adopted:

Resolved, That a committee of five be appointed by the chairman of the Council, two of said committee to be members of the Council and three to be members of the Association at large, to survey the activities and expenditures of the California Medical Association and report to the Council at its first meeting at Riverside.

10. Cancer Commission.—A letter was read from the secretary of the Cancer Commission outlining the Commission's plan for a public meeting at Riverside and requesting that the Council give an expression of opinion.

Action by the Council.—On motion of Gibbons, seconded by Schaupp and unanimously carried, the following resolution was adopted:

Resolved, That the Council approve the plan as outlined in the letter of the Cancer Commission and suggest that the meeting be held on Monday evening and limited to a duration of one hour.

11. Reinstatement of Members.—In accordance with Chapter II, Section 2 of the Constitution, the secretary presented a list of members whose memberships had lapsed on account of failure to pay annual assessments by April 1, and whose dues had been forwarded to the Association by component county secretaries since September 30.

Action by the Council.—On motion of Ullmann, seconded by Gibbons and unanimously carried, the following resolution was adopted:

Resolved, That all members of the California Medical Association who have been reinstated by component county medical societies since September 30, 1933, be reinstated to good standing in the California Medical Association for the year 1933.

12. Retired Membership.—The secretary presented membership data and the request of the San Francisco County Medical Society that George Evans be granted retired membership in the California Medical Association.

Action by the Council.—On motion of Tanner, seconded by Schaupp and unanimously carried, the following resolution was adopted:

Resolved, That George H. Evans, M. D., Berkeley, member of the San Francisco County Medical Society, be granted retired membership in the California Medical Association.

13. Death of George G. Hunter.—Edward M. Pallette, chairman of the Special Committee appointed by the chairman of the Council to prepare a resolution on behalf of the Council on the death of George G. Hunter, presented the following resolution, which was unanimously adopted by the Council:

By the tragic death of Dr. George Graham Hunter on December 12, 1933, the Los Angeles County Medical Association and the California Medical Association lost a most outstanding and devoted member. In the councils of both organizations, Doctor Hunter's broad vision and sound judgment were most valuable and highly respected.

Scientific medicine, especially in neurology and psychiatry, likewise sustained a great loss. And the community and state will miss this most useful medical practitioner and civic worker.

Doctor Hunter was born in Illinois. At the age of twelve the family came to California. He attended the University of Southern California one year, but finished his college course at the University of California at Berkeley in 1903. He received the degree of Doctor of Medicine in 1905 from the same institution. In 1907 he came to Los Angeles to become associated with Dr. H. G. Brainerd and in due season became his partner.

Doctor Hunter held many positions of honor and trust in the medical organizations of the city, county, and state. He was past president of the Los Angeles County Medical Association, secretary-treasurer and

past president of the Clinical and Pathological Society, past president of the Society of Psychiatry and Neurology, member of the Board of Councilors of the California Medical Association, Fellow of the American College of Physicians, member of the Insanity Commission of the State, member of the Psychopathic Association of California. He was a member of the staff of the Los Angeles General Hospital for twenty years, and served on the staff of St. Vincent's, Cedar of Lebanon, California and Santa Fe hospitals, as well as several private hospitals. He served for nine months as captain of the Medical Corps with Base Hospital No. 35 in France during the World War. In addition to all of this, he found time for special study in the neurologic centers of Philadelphia, Boston, and Baltimore.

Your committee feels that the splendid and most worthy tribute paid to his memory by Dr. Carl S. Patten, pastor of the First Congregational Church in Los Angeles, at his funeral service so fittingly expresses the sentiments of the entire medical profession that they quote briefly from this address as follows:

"Words and names and outward professions mean little or nothing here. The question of the ancient prophet goes to the root of the matter: 'What doth the Lord require of thee but to do justly, to love mercy, and to walk humbly with thy God.' So Doctor Hunter did, and so he walked; seeking not his own but the good of those who trusted so much to him and in the steps and after the pattern of the Great Physician. I have not known a better Christian man.

"His attachments were deep and permanent. He gave his friendship without stint and his love without recall. And what he thus gave was returned to him in fullest measure. He carried his family and his friends always in his heart. And what he was to those outside, that and vastly more he was to his own. One of his friends said of him: 'He wove himself into your life, so that having once known him you could not get along without him.' There is a motto that hung, and still hangs, in his house: 'If lives were measured by the joy we give, not by the years we chance to live, you, whose fine spirit helps and lifts and cheers so many of us, would live a thousand years.' And so he does live, and so he will live, among us as long as we live."

(Signed) WILLIAM DUFFIELD
CLARENCE G. TOLAND
EDWARD M. PALLETTE

On motion duly made, seconded and unanimously carried, the foregoing tribute was ordered inserted in the records of the Association and a copy sent to Mrs. Hunter.

14. Deaths of Officers of the Association.—Discussion was had of the notification of the office of the secretary in the event of the death of officers of the Association.

Action by the Council.—On motion of Toland, seconded by Roblee and unanimously carried, the following resolution was adopted:

Resolved, That upon the death of an officer of the Association the district councilor notify the office of the secretary of such death and the secretary then notify all officers of the Association.

15. Delinquency of County Society Officer.—The secretary stated that the 1933 dues of one of the officers of a component county society were delinquent and the physician was, therefore, no longer a member of the California Medical Association.

Action by the Council.—On motion of Ullmann, seconded by Toland and unanimously carried, the following resolution was adopted:

Resolved, That the chairman of the Council write to said officer, calling his attention to the provisions of the Constitution and By-Laws, which the Council cannot change, and send a copy of the letter to the president of the component county society.

16. San Diego County Society Dues.—A letter was read from the secretary of the San Diego County Society stating that several members of that society had appealed to the county society for leniency in the matter of loss of membership because of inability to pay the dues either in full or in part.

Action by the Council.—On motion of Schaupp, seconded by Gibbons and unanimously carried, the following resolution was adopted:

Resolved, That the secretary notify the secretary of the San Diego County Society of practices in other counties and call to the secretary's attention the fact that the Constitution and By-Laws of the California Medical Association make no provision for carrying active members without the payment of dues.

17. Membership in Los Angeles County Society.—Doctor Ullmann presented facts regarding the membership of a physician residing and practicing in Ventura County, who had been denied membership in the Ventura County Medical Society and had been accepted for membership in Los Angeles County without obtaining the consent of the Ventura County society.

Action by the Council.—On motion of Pallette, seconded by Gibbons and unanimously carried, the following resolution was adopted:

Resolved, That the secretary write the secretary of the Los Angeles County Medical Society requesting a report on the membership of Joseph E. Whitlow, M.D.

18. Councilor-at-Large.—To fill the vacancy created by the death of Dr. George Hunter, Harry H. Wilson of Los Angeles was nominated councilor-at-large by Edward M. Pallette of Los Angeles; such nomination was duly seconded. It was moved by George H. Kress, seconded and unanimously carried, that the nominations be closed and the secretary cast the ballot for Dr. Harry H. Wilson. The secretary cast the ballot and the chairman announced the election of Dr. Harry H. Wilson, councilor-at-large, to serve until his successor is elected by the 1934 House of Delegates.

19. Advertising in Journal.—The secretary submitted a report on advertising in CALIFORNIA AND WESTERN MEDICINE.

Doctor Kress stated that the proposed advertising contract with Mr. Adam Guttman, as heretofore authorized and as prepared by the general counsel, could not be accepted by Mr. Guttman, who needed a larger advance, and explained Mr. Guttman's financial situation. Doctor Kress stated that in other respects the contract as prepared by the general counsel, which is otherwise identical with the contract held by Mr. Flynn, was satisfactory to Mr. Guttman and the Los Angeles councilors.

A full discussion was had by the Council.

Action by the Council.—On motion of Kress, seconded by Gibbons and unanimously carried, the following resolution was adopted:

Resolved, That the general counsel revise the contract heretofore prepared by him between this Association and Mr. Adam Guttman, appointing Mr. Guttman the advertising representative of CALIFORNIA AND WESTERN MEDICINE in the southern eight counties, to provide for an advance of \$200 to Mr. Guttman on execution of the contract, and further advances at the rate of \$50 per month thereafter up to \$600 in all; all of said advances to be repaid out of commissions payable to Mr. Guttman until the full amount of said advances has been repaid before he receives any part thereof; and be it further

Resolved, That the chairman of the Council and the secretary be and they are hereby authorized and empowered to execute said agreement with Mr. Guttman in the name and on behalf of this Association.

20. County Hospitals.—The general counsel reported on the county hospital situation.

21. Laboratory Code.—A letter was read from the secretary of the Los Angeles County Medical Association requesting assistance by the Association in the payment of legal fee incurred in the matter of the code group of laboratories of radiology and clinical pathology, the secretary of the Los Angeles County Medical Association stating that the legal service was necessary to protect the medical profession of the state in connection with a state law.

Action by the Council.—On motion of Pallette, seconded by Kress and carried, the following resolution was adopted:

Resolved, That, inasmuch as the secretary of the Los Angeles Medical Association had previously consulted the chairman of the Council and the counsel of the Association, the California Medical Association pay \$500 toward the legal expense involved in the matter of the code group of laboratories of radiology and clinical pathology.

Doctors Roblee and Schaupp voted in the negative.

22. Legal Assistance for San Francisco Medical Society Professional Conduct Committee.—A letter was read from the secretary of the San Francisco County Medical Society requesting the Council to permit the county society committee on professional conduct to request legal advice of the general counsel on questions of policy that arise in the course of its work.

Action by the Council.—On motion of Kress, seconded by Harris and unanimously carried, the following resolution was adopted:

Resolved, That only such requests for legal assistance of the general counsel can be considered as come from a component county society through a duly authorized officer.

23. San Joaquin County Society.—A letter was read from the San Joaquin County Society regarding the filing of a brief in the District Court of Appeal. No action taken.

24. Santa Clara County Society.—Doctor Schaupp stated that he had discussed the proposed medical service plan in Santa Clara County with one of the members of the society and that he had been asked if there were any objection to the Santa Clara County Society seeking advice from General Counsel Peart if the expense were handled by the men in Santa Clara County.

Action by the Council.—On motion of Harris, seconded by Pallette and unanimously carried, the following resolution was adopted:

Resolved, That the Council has no objection to the employment of Mr. Peart by the Santa Clara County Society and that Doctor Schaupp can so notify his correspondent.

25. Recess.—On motion of Pallette, seconded by Phillips and unanimously carried, a recess of the Council was declared to permit a meeting of the Trustees Of The California Medical Association and the Medical Society of the State of California.

26. Call to Order.—After a recess, the meeting was called to order by the chairman.

27. Nominating Committee for Standing Committees.—Discussion was had of the desirability of a nominating committee to select nominees for vacancies on standing committees, which will occur at the annual session at Riverside.

Action by the Council.—On motion of Schaupp, seconded by Phillips and unanimously carried, the following resolution was adopted:

Resolved, That the president be authorized to appoint a nominating committee, which shall submit prior to the second meeting of the House of Delegates, names of nominees for vacancies on standing committees for approval by the Council and submission to the House of Delegates.

28. Woman's Auxiliary.—T. Henshaw Kelly, chairman of the Executive Committee's Committee on Amendments to the Woman's Auxiliary, submitted a verbal report. Doctor Kelly stated that the provisions of the Constitution regarding submission to officers and county societies and publication in the JOURNAL had been complied with and that his Special Committee felt there were just two points to be considered further—one regarding the appointment of all standing committee chairmen by the president, and the other the wording of the provisions on the board of directors.

Action by the Council.—On motion of Pallette, seconded by Roblee and unanimously carried, the following resolution was adopted:

Resolved, That the Council approve the amendments to the Constitution submitted by the Woman's Auxiliary with the exception of the provisions regarding the appointment of all committee chairmen by the

president and the conflict regarding the membership of the board of directors, which shall be placed on the docket for further discussion at the first meeting of the Council at Riverside.

Doctor Roblee stated that Mrs. Doane and Mrs. Coulter had spent a day at Riverside and had expressed the desire that they be allowed \$300 for the entertainment of guests by the Auxiliary at Riverside, stating that it might not be necessary to use the entire allocation.

Action by the Council.—On motion of Roblee, seconded by Reinle and unanimously carried, the following resolution was adopted:

Resolved, That the California Medical Association allow the Woman's Auxiliary a credit of \$300 for entertainment at Riverside, to be used at the discretion of the Auxiliary.

29. **Ethics.**—Discussion was had of the revision of professional ethics to comply with present-day practice of medicine and to provide for medical service as contemplated by various county societies.

Action by the Council.—On motion of Kress, seconded by Schaupp and unanimously carried, the following resolution was adopted:

Resolved, That a committee consisting of the president, the president-elect, the chairman of the Council, and the general counsel be appointed to study the present Code of Ethics and submit a report to the Council.

30. **Riverside County Society.**—A letter was submitted from the Riverside County Society stating that it desired to amend its Constitution to provide that "No member of the Riverside County Medical Society shall engage to practice through any corporation, lay or otherwise, directly organized to care for the sick, that has not received the sanction of the California Medical Association."

Action by the Council.—On motion duly made, seconded and carried, the following resolution was adopted:

Resolved, That the Council considers this a proper amendment to the Constitution and By-Laws of the Riverside County Medical Society.

31. **Federal Relief.**—Doctor Kelly, chairman of the Special Committee on Federal Relief, submitted a brief report on the present status of federal relief and the Civil Works Administration.

32. **Fees.**—A letter was read from the secretary of the San Diego County Medical Society objecting to the reduction in fees for general examination of ex-service men and stating that members of the county medical society be barred from doing these examinations unless a readjustment of the schedule is made. No action taken.

33. **Book List.**—The Director of the Department of Public Relations stated that the libraries in Los Angeles wanted to place the list of books recommended by the California Medical Association in library windows, etc., and were desirous that the lists should bear the notation, "Recommended by the California Medical Association." The Council agreed with Doctor Dickie that it was one thing to recommend certain books and another to publicize such list.

After discussion, on motion of Gibbons, seconded by Kiger and unanimously carried, the following resolution was adopted:

Resolved, That lists of books prepared for reading by the laity shall not bear notation of recommendation by the California Medical Association because if any books are recommended, in justice to all, the Association would have to pass upon any submitted to it, and at present no estimate of the amount of work this might mean can be made.

34. **Orange County Bulletin.**—A letter was read from the Orange County Society requesting an exchange between the Orange County Bulletin and CALIFORNIA AND WESTERN MEDICINE.

Action by the Council.—On motion of Gibbons, seconded by Toland and unanimously carried, the following resolution was adopted:

Resolved, That the request of the Orange County Society be granted.

35. **Lectures.**—A letter was read from the Santa Barbara Clinic requesting advice on the ethics of members of medical groups presenting lectures to their own patients on preventive medicine. It was stated that no advertising, newspaper notices or uncontrolled publicity would be given the lectures, the present patient group alone being informed of the lectures.

Action by the Council.—On motion of Schaupp, seconded by Toland and unanimously carried, the following resolution was adopted:

Resolved, That the Council sees no objection to lectures given by physicians to their own patients provided that no newspaper or other publicity be given the lectures.

36. **Membership in Ventura.**—Doctor Ullmann stated that Ventura County was considering adopting a by-law whereby any physician who failed to attend four consecutive meetings of the society would be dropped from membership. It was pointed out that this would deprive physicians of their membership in the state and national associations and that even if a man were too busy to attend meetings his coöperation and affiliation with county societies was most desirable.

Action by the Council.—On motion of Gibbons, seconded by Toland and unanimously carried, the following resolution was adopted:

Resolved, That the Council does not approve of the proposed by-law of Ventura County Medical Society.

37. **Basic Science Act.**—Doctor Toland stated he believed it was desirable to consider the adoption of a basic science law in California.

Action by the Council.—On motion of Toland, seconded by Kress and unanimously carried, the following resolution was adopted:

Resolved, That the former committee on the Basic Science Act be revived and that it have power to appoint additional advisory members; and that it submit a progress report at the next meeting of the Council.

38. **Rolphing Appeal.**—Correspondence regarding the appeal of Rudolph Rolphing to the Council of the California Medical Association was presented. The secretary stated that on December 2, 1933, a registered letter had been forwarded to Doctor Rolphing, setting January 20, 1934, as the date for the hearing of his appeal; that although a return receipt from the post-office had been received by the Association evidencing the delivery of the letter to Doctor Rolphing, no reply had been received.

39. **Council Meeting.**—On motion of Gibbons, seconded by Reinle and unanimously carried, the following resolution was adopted:

Resolved, That the next meeting of the Council be held at Riverside at 8 p. m. Sunday, April 29, 1934.

40. **Adjournment.**—There being no further business the meeting adjourned.

T. HENSHAW KELLY, *Chairman.*
EMMA W. POPE, *Secretary.*

EXECUTIVE COMMITTEE DIGESTS*

Digest of the Minutes of the One Hundred and Fortieth Meeting of the Executive Committee

Held in the offices of the Association, April 7, 1934, at 9:30 a. m.

1. **Roll Call.**—All members present.

2. **Financial Statements.**—Financial statements for the months of December, 1933 and January, February, and March, 1934, presented and approved.

3. **Hospital Service Plans.**—Discussion of adaptability of Alameda County Hospital Service plan to state-wide set-up.

Resolved, That Alameda plan be approved by Executive Committee and recommended for unanimous passage by Council prior to annual meeting at Riverside.

* For the information of members, digests or summaries of the minutes of the Executive Committee meetings are compiled for publication in CALIFORNIA AND WESTERN MEDICINE.

4. **Public Health League Exhibit.**—Request of the Public Health League of California for exhibit space at the Riverside session granted.

5. **Publicity for Annual Session.**—The Publicity Committee for the Riverside meeting, consisting of Doctors Kress, Wilson, and Kelly, was appointed. Expense of attendance at the Riverside session of Messrs. Hill and Cochems authorized.

6. **Pre-Convention Bulletin.**—Reprints of the Pre-Convention Bulletin not authorized. Publication in CALIFORNIA AND WESTERN MEDICINE deemed sufficient.

7. **State and Assembly Districts.**—Los Angeles County plan for mapping senate and assembly districts explained.

Resolved, Committee appointed, consisting of Doctors Reinle, Wilson, Kelly, and Harris, to organize the senate and assembly districts, with power to engage necessary help.

8. **Legislation.**—Discussion of proposed legislation to be presented at the next session of the legislature: (a) Proposed malpractice bill. (b) Basic science act. (c) Resolution of Lawyers' Club of Los Angeles for the relief of professional men; general counsel was authorized to reply to Lawyers' Club letter. (d) Proposed bill for hospitalization of persons injured on highways. Doctor Harris was appointed to reply to letter from Sonoma County Society asking for information on legislation.

9. **Child Welfare.**—Letter from Doctor Stadtmuller, Bureau of Child Hygiene, regarding examination of school children read. A special committee, consisting of Doctors Kelly, Reinle, Dickie, and Wilson, was appointed to work with the director of public health, with authority to act.

10. **Date of Council Meeting.**—The date of the next Council meeting was set for 2 p. m. at Riverside, Sunday, April 28, 1934.

11. **County Hospitals.**—Letter from Doctor Tanner regarding services rendered by physicians and surgeons in county hospitals. Doctor Tanner was requested to present written statement for discussion at the annual session. The general counsel was authorized to reply to Doctor Tanner.

12. **Survey Graphic.**—Secretary instructed to secure copies of April issue of *Survey Graphic* for councilors if possible.

13. **Committee on History and Obituaries.**—Doctor Kress stated that he had secured three books containing information on medical history in California. Three medical history books purchased for the Association by Doctor Kress accepted and reimbursement for the amount expended in the purchase of same authorized. Committee on History and Obituaries allocated \$300 for the purchase of books, etc., necessary for use in the compilation of a history of the California Medical Association, subject to the approval of the chairman of the Executive Committee.

14. **Roster of Members.**—Discussion of value of roster of membership. The secretary of the Association was authorized to send out a letter to delinquent members, stating that a list of members as of May 1 will be published in the JOURNAL, and calling their attention to the loss of membership in county, state, and national associations, due to delinquency. The president of the Association was authorized to invite, by letter, members of the Association to the Riverside session.

15. **Complimentary Copy of Journal.**—Doctor Kress stated that the president of the Wisconsin Medical Society had asked that he be given a complimentary copy of the JOURNAL, in addition to the exchange copy already sent to the state society. Request granted.

16. **Commissions on Exhibit Space.**—Twenty-five per cent commission allowed advertising agents on contracts secured from other than advertisers on exhibit space at the Riverside session.

17. **Adjournment.**—There being no further business the meeting adjourned.

KARL L. SCHAUPP, *Chairman.*
EMMA W. POPE, *Secretary.*

Minutes of the Two Hundred and Twenty-Second Meeting of the Council of the California Medical Association

The following minutes were approved by the Council at its two hundred and twenty-sixth meeting, held at Mission Inn, Riverside, on May 3, 1934.

Held in the Allhambra Room, Mission Inn, Riverside, Sunday, April 29, 1934, 3:30 p. m.

Present.—Doctors George G. Reinle, president; Clarence G. Toland, president-elect; Edward M. Pallette, speaker; T. Henshaw Kelly, chairman of Council; Karl L. Schaupp, chairman of the Executive Committee; Councilors W. W. Roblee, C. R. Howson, H. J. Ullmann, F. R. DeLappe, A. L. Phillips, O. D. Hamlin, C. E. Schoff, H. S. Rogers, Harry H. Wilson, C. O. Tanner, W. H. Kiger, M. R. Gibbons, J. B. Harris; C. A. Dukes, chairman of Committee on Public Relations; Emma W. Pope, secretary-treasurer; George H. Kress, editor; Walter M. Dickie, director of the Department of Public Relations; and Hartley F. Peart, general counsel.

Absent.—None.

1. **Call to Order.**—The meeting was called to order by the chairman, T. Henshaw Kelly.

2. **Minutes of the Council.**—Minutes of the two hundred and twentieth meeting of the Council as mailed to all members were presented.

Action by the Council.—On motion of Ullmann, seconded by Schaupp and unanimously carried, the following resolution was adopted:

Resolved, That the minutes of the two hundred and twentieth meeting of the Council as mailed to all members be approved.

3. **Report of the Council.**—T. Henshaw Kelly, chairman of the Council, submitted the report of the Council for discussion and revision before presentation to the House of Delegates. The report was read and discussed section by section.

The problem of emergency relief was discussed in detail and on motion of Kress, seconded by Pallette and unanimously carried, the following resolution was adopted:

Resolved, That a Special Committee, consisting of Doctors Wilson, Kelly, and Schaupp, be appointed to revise the section on Emergency Relief and present a draft to the Council on Monday for inclusion in the report of the Council for presentation to the House of Delegates.

After discussion, it was agreed that the Special Committee on the Basic Science Act should submit a report to the House of Delegates.

The question of the annual assessment of dues was discussed and on motion of Phillips, seconded by Howson and unanimously carried, the following resolution was adopted:

Resolved, That the Council recommend to the House of Delegates that the annual dues for the year 1935-36 be fixed at \$10.

4. **Reports of Officers and Committees.**—The reports of the secretary-treasurer, editor, Auditing Committee, Committee on Public Relations, and Cancer Commission, as published in the Pre-Convention Bulletin in the April issue of CALIFORNIA AND WESTERN MEDICINE, were presented.

Action by the Council.—On motion of Ullmann, seconded by Harris and unanimously carried, the following resolution was adopted:

Resolved, That the foregoing reports be approved as published in the Pre-Convention Bulletin (April issue of CALIFORNIA AND WESTERN MEDICINE).

The reports of the Standing and Special Committees, as published in the Pre-Convention Bulletin, were presented and on motion of Ullmann, seconded by Pallette, the following resolution was adopted:

Resolved, That the reports of Standing Committees, as published in the April issue of CALIFORNIA AND WESTERN MEDICINE, be approved.

5. **Trustees Of The California Medical Association.**—T. Henshaw Kelly, president of the Trustees Of The California Medical Association, presented a report on

the financial status of the Trustees. The report was unanimously approved by the Council.

6. Amendments to the Constitution of the Woman's Auxiliary.—Discussion was had of the proposed amendments to the Woman's Auxiliary.

Action by the Council.—On motion duly made, seconded and carried, the following resolution was adopted:

Resolved, That the Council does not approve the proposed revised amendments relating to Article V, Section 1, and Article VIII, Section 2, and suggests that the Woman's Auxiliary amend its procedure for the selection of standing committees to conform to those of the California Medical Association as set forth in Chapter V, Section 2, of the By-Laws of the California Medical Association; and be it further

Resolved, That the Council approves suggested amendments to Article VII, Section 9, if "as revised November, 1933," is added at end of proposed amendment.

7. Invitation to Officers and Councilors.—Dr. William Roblee extended an invitation to the members of the Council to be his guests at luncheon at his home on Monday immediately following adjournment of the first general session. The invitation was cordially accepted by the members.

8. Officers Luncheon.—The secretary announced that the luncheon for county society officers and officers of the California Medical Association would be held on Tuesday at 1 p. m. in the refectory room.

9. House of Delegates Program.—The program for the first meeting of the House of Delegates as published in the official program was amended to include a report by the Committee on Basic Science Act following item 13, and was then approved as amended. The program for the second meeting of the House of Delegates was approved as published in the official program.

10. Report of the Legal Department.—General Counsel Peart submitted the report of the legal department.

Mr. Peart discussed the use of county hospitals throughout the state by the non-indigent and explained the steps which had been taken to curtail this practice.

Mr. Peart then presented the proposed hospital service plan, which was discussed in detail by the members of the Council.

At this point adjournment was taken until 8:30 p. m.

Adjourned Meeting

1. Call to Order.—The adjourned meeting of the Council was called to order by the chairman, T. Henshaw Kelly.

2. Redistricting Council Districts.—Doctor Ullmann, councilor of the third district, stated that he had discussed with the councilor of the first district the changing of San Bernardino County from the third to the first district, since San Bernardino is adjacent to Riverside and if placed in the first councilor district would receive considerably greater contact from the councilor.

Action by the Council.—On motion of Kress, seconded by Phillips and unanimously carried, the following resolution was adopted:

Resolved, That the chairman appoint a committee of three to present a report to the Council on redistricting the first and third districts.

The chairman appointed as members of the committee, Doctors Rogers, Roblee, and Ullmann.

3. Hospital Service Plans.—The proposed plan for hospital service was discussed in detail by members of the Council and the general attorney.

A tentative resolution was read providing for the establishment by the Association of a plan for reducing the cost of illness by the organization of an insurance corporation under the laws of the state of California to provide hospital service on a periodic payment basis.

Action by the Council.—On motion duly made, seconded and carried, the following resolution was adopted:

Resolved, That the tentative resolution on hospital service be placed in the hands of a committee of three, to be appointed by the chairman, for revision and presentation at the Monday Council meeting.

The chairman appointed as members of the committee, Doctors Reinle, Schaupp, and Harris.

4. Adjournment.—There being no further business the meeting adjourned to meet at 2:30 p. m. Monday.

T. HENSHAW KELLY, *Chairman*.

EMMA W. POPE, *Secretary*.

Minutes of the Two Hundred and Twenty-Third Meeting of the Council of the California Medical Association

The following minutes were approved by the Council at its two hundred and twenty-sixth meeting, held at Mission Inn, Riverside, on May 3, 1934.

Held in the Alhambra Room, Mission Inn, Riverside, Monday, April 30, 1934, at 2:30 p. m.

Present.—Doctors George G. Reinle, president; Clarence G. Toland, president-elect; Edward M. Palette, speaker; T. Henshaw Kelly, chairman of Council; Karl L. Schaupp, chairman of the Executive Committee; Councilors W. W. Roblee, C. R. Howson, H. J. Ullmann, F. R. DeLappe, A. L. Phillips, C. E. Schoff, H. S. Rogers, H. H. Wilson, C. O. Tanner, W. H. Kiger, M. R. Gibbons, J. B. Harris; C. A. Dukes, chairman of the Committee on Public Relations; Emma W. Pope, secretary-treasurer; George H. Kress, editor; Walter M. Dickie, director of the Department of Public Relations; and Hartley F. Peart, general counsel.

Absent.—Dr. O. D. Hamlin.

1. Call to Order.—The meeting was called to order by the chairman, T. Henshaw Kelly.

2. Invitation for Annual Session.—Dr. G. W. Walker, Mayor Z. S. Leymel, Senator Hamilton, and Mr. Clayton Smith extended an invitation to the Association to hold the next annual session of the California Medical Association at Fresno.

3. Hospital Service Plan.—Further discussion was had on the proposed hospital service plan. The resolution prepared for submission to the House of Delegates was read and discussed, with particular reference to the scope of the proposed organization and the financial obligations of the Association.

Action by the Council.—On motion of DeLappe, seconded by Schoff, the following resolution was presented:

Resolved, That the hospital service plan be carried to the House of Delegates by its sponsors, if they so desire, without recommendation by the Council.

After further discussion a vote was taken on the resolution. Thirteen negative and five affirmative votes were cast. Motion defeated. (Doctors Palette, DeLappe, Schoff, Rogers, and Wilson voted in the affirmative.)

Action by the Council.—On motion of Reinle, seconded by Dukes, the following resolution was adopted:

Resolved, That the hospital service plan be presented to the House of Delegates with the recommendation of the Council.

Doctors DeLappe, Palette, Schoff, Rogers, and Wilson voted in the negative.

The Council felt that the fact that this hospital plan is a state-wide plan of organization and not designed for any one county should be clarified for the House of Delegates.

Action by the Council.—On motion of Howson, seconded by Reinle, the following resolution was adopted:

Resolved, That this Council instruct Mr. Peart to prepare a brief summary of this plan, making it definite and clear that this is not the Alameda County Plan for hospital service, and that he submit this summary to the Council for discussion before presen-

tation at the Wednesday night meeting of the House of Delegates and that the secretary arrange to have a copy in the hand of each delegate on Wednesday evening.

4. Committee on Survey of Activities and Expenditures of Association.—Dr. William Roblee, chairman of the Special Committee on Survey of Activities and Expenditures of the Association, submitted the report of his committee.

Action by the Council.—On motion of Ullmann, seconded by Reinle and unanimously carried, the following resolution was adopted:

Resolved, That the report of the Committee on Expenditures be accepted and that it be presented by the chairman of the Committee to the House of Delegates.

5. Redistricting of First and Third Councilor Districts.—The special committee appointed to make recommendation on the redistricting of the first and third councilor districts by removing San Bernardino County from the third district and placing it in the first district stated that the change would provide for better contact with the San Bernardino County Society and that no objection could be made.

Action by the Council.—On motion of Rogers, seconded by Ullmann and unanimously carried, the following resolution was adopted:

Resolved, That the Council recommend to the House of Delegates the redistricting of councilor districts numbers one and three by the placing of San Bernardino County in District No. 1, provided that the change is agreeable to the delegates of the respective districts.

6. Membership.—A letter from the Santa Clara County Medical Society asking that Jonas Clark be granted special membership in the Association was read.

Action by the Council.—On motion of Phillips, seconded by Howson and unanimously carried, the following resolution was adopted:

Resolved, That Dr. Jonas Clark, Gilroy, member of the Santa Clara County Medical Society, be granted retired membership in the California Medical Association.

7. Publicity and Education.—Discussion was had of the opportunities for medical education and publicity throughout the state with special reference to Kern County.

Action by the Council.—On motion of Dukes, seconded by Gibbons and unanimously carried, the following resolution was adopted:

Resolved, That the Committee on Hospitals, Dispensaries, and Clinics be granted \$500 for purposes of publicity and education in Kern County.

8. Interim Committee on Health Insurance.—After discussion it was decided that the Interim Committee should incorporate its report into the report of the Council for submission to the House of Delegates.

Action by the Council.—On motion of Ullmann, seconded by Phillips and unanimously carried, the following resolution was adopted:

Resolved, That the report of the Interim Committee be accepted and the committee continued.

9. Adjournment.—There being no further business the meeting adjourned to meet at 9:30 a. m. Tuesday.

T. HENSHAW KELLY, *Chairman.*
EMMA W. POPE, *Secretary.*

Minutes of the Two Hundred and Twenty-Fourth Meeting of the Council of the California Medical Association

The following minutes were approved by the Council at its two hundred and twenty-sixth meeting, held at Mission Inn, Riverside, on May 3, 1934.

Held in the Alhambra Room, Mission Inn, Riverside, California, Tuesday, May 1, 1934, at 9:30 a. m.

Present.—Doctors George G. Reinle, president; Clarence G. Toland, president-elect; Edward M. Palette, speaker; T. Henshaw Kelly, chairman of the

Council; Karl L. Schaupp, chairman of the Executive Committee; Councilors W. W. Roblee, C. R. Howson, H. J. Ullmann, F. R. DeLappe, A. L. Phillips, C. E. Schoff, H. S. Rogers, H. H. Wilson, C. O. Tanner, W. H. Kiger, M. R. Gibbons, J. B. Harris; C. A. Dukes, chairman of the Committee on Public Relations; Emma W. Pope, secretary-treasurer; George H. Kress, editor; Walter M. Dickie, director of the Department of Public Relations; and Hartley F. Peart, general counsel.

Absent.—Dr. O. D. Hamlin.

1. Call to Order.—The meeting was called to order by the chairman, T. Henshaw Kelly.

2. Minutes of the Executive Committee.—The minutes of the one hundred and fortieth meeting of the Executive Committee as mailed to all councilors were presented.

Action by the Council.—On motion of Ullmann, seconded by Gibbons and unanimously carried, the following resolution was adopted:

Resolved, That the minutes of the one hundred and fortieth meeting of the Executive Committee be approved:

3. Invitations for Annual Meeting.—The secretary presented invitations for the next annual session from Hotel Coronado, Yosemite, Hotel Ambassador, San Francisco, and Fresno.

Action by the Council.—After discussion, on motion of Dukes, seconded by Phillips, and unanimously carried, the following resolution was adopted:

Resolved, That the next annual session of the California Medical Association be held at Yosemite.

The question of the most advantageous date for the annual session was discussed, and it was decided that, in order to avoid conflict with the American Medical Association and other meetings, the date be set at a later time.

Action by the Council.—On motion of Kress, seconded by Tanner, and unanimously carried, the following resolution was adopted:

Resolved, That the Executive Committee be empowered to set the date of the next annual session.

4. Memberships.—Request of the board of directors of the San Francisco County Medical Society that John Campbell Spencer be granted retired membership was presented.

Action by the Council.—On motion of Toland, seconded by Howson and unanimously carried, the following resolution was adopted:

Resolved, That John Campbell Spencer, Palo Alto, member of the San Francisco County Medical Society, be granted retired membership in the California Medical Association.

Request of the board of directors of the San Francisco County Medical Society that Herbert Gunn be granted retired membership was presented.

Action by the Council.—On motion of Roblee, seconded by Gibbons and unanimously carried, the following resolution was adopted:

Resolved, That Herbert Gunn, San Francisco, member of the San Francisco County Medical Society, be granted retired membership in the California Medical Association.

Request of the board of directors of the San Francisco County Medical Society that Gertrude Spriggs be granted retired membership was presented.

Action by the Council.—On motion of Dukes, seconded by Gibbons and unanimously carried, the following resolution was adopted:

Resolved, That Gertrude Spriggs, Lomita, member of the San Francisco County Medical Society, be granted retired membership in the California Medical Association.

Request from the San Diego County Medical Society that George B. Worthington be granted retired membership was presented.

Action by the Council.—On motion of Tanner, seconded by Dukes and unanimously carried, the following resolution was adopted:

Resolved, That George B. Worthington, San Diego, member of the San Diego County Medical Society, be granted retired membership in the California Medical Association.

5. **Physical Therapy.**—The secretary stated that the chairman of the Committee on Physical Therapy desired to submit a report for his committee. The secretary was instructed to ask Doctor Hibben to file his report with the Council for consideration.

The value of physical therapy in the practice of medicine was pointed out.

Action of the Council.—On motion of Kress, seconded by Pallette and unanimously carried, the following resolution was adopted:

Resolved; That the chairman of the Council or the president of the Association be empowered to appoint a special committee of five on physical therapy.

6. **Woman's Auxiliary.**—Letters of appreciation of the \$300 donation to the Woman's Auxiliary were presented and ordered filed.

7. **Commission to Advertising Agents.**—Discussion was had of the payment of commissions on exhibit space sold by advertising agents. It was pointed out that it was agreed that 25 per cent commission should be allowed on all space sold by advertising agents, but that a question had arisen as to whether such commissions earned were to be deducted from the cash advanced the southern advertising agent, or whether such commissions on exhibit space were to be considered separate and distinct from the contract covering advertising commission and were to be paid in cash.

Action by the Council.—On motion of Gibbons, seconded by Roblee and unanimously carried, the following resolution was adopted:

Resolved, That the commissions on exhibit space be paid forthwith on the basis that it is a separate transaction from regular advertising in the JOURNAL.

8. **Publicity.**—A letter from the secretary of the Los Angeles County Medical Association was presented together with attached publicity regarding a paper submitted at the meeting of the American Urological Association by a member of the San Francisco County Medical Society. The letter of the Los Angeles Association pointed out the necessity of rigid control of publicity.

Action by the Council.—On motion of Schaupp, seconded by Gibbons and Ullmann, the following resolution was adopted:

Resolved, That a copy of the letter of the Los Angeles County Medical Society and the attached publicity be referred to the San Francisco County Medical Society.

9. **American Urological Society Meeting.**—A request was presented that the Council invite the American Urological Association to meet in San Francisco in 1935.

Action by the Council.—On motion of Schaupp, seconded by Ullmann and unanimously carried, the following resolution was adopted:

Resolved, That the Council of the California Medical Association extend an invitation to the American Urological Association to meet in San Francisco in 1935.

10. **Legislation.**—Discussion was had of a proposed malpractice bill which has received the endorsement of the Public Health League. The general counsel outlined the advantages and disadvantages of such legislation.

Action by the Council.—On motion of Kress, seconded by Reinle and unanimously carried, the following resolution was adopted:

Resolved, That a report on proposed malpractice legislation be submitted by the general counsel at the May meeting of the Council.

Doctor Harris outlined briefly the proposed legislation for the next session of the legislature and stressed the importance of local contacts in the various communities.

Doctor Kelly stated that several members of the Council felt that the transcript of the decision rendered by Judge James of San Jose was of value to the Association and a copy had been obtained at an expense of \$50.

Action by the Council.—On motion of Pallette, seconded by DeLappe and unanimously carried, the following resolution was adopted:

Resolved, That the expenditure of \$50 for securing of the transcript of the decision of Judge James relative to chiropractors be approved.

11. **Adjournment.**—There being no further business the meeting adjourned until 10 a. m. Wednesday.

T. HENSHAW KELLY, *Chairman.*
EMMA W. POPE, *Secretary.*

Minutes of the Two Hundred and Twenty-Fifth Meeting of the Council of the California Medical Association

The following minutes were approved by the Council at its two hundred and twenty-sixth meeting, held at Mission Inn, Riverside, on May 3, 1934.

Held in the Alhambra Room, Mission Inn, Riverside, Wednesday, May 2, 1934, at 2:30 p. m.

Present.—Doctors George G. Reinle, president; Clarence G. Toland, president-elect; Edward M. Pallette, speaker; T. Henshaw Kelly, chairman of Council; Karl L. Schaupp, chairman of the Executive Committee; Councilors W. W. Roblee, C. R. Howson, H. J. Ullmann, F. R. DeLappe, A. L. Phillips, C. E. Schoff, H. S. Rogers, H. H. Wilson, C. O. Tanner, W. H. Kiger, M. R. Gibbons, J. B. Harris; C. A. Dukes, chairman of the Committee on Public Relations; Emma W. Pope, secretary-treasurer; George H. Kress, editor; Walter M. Dickie, director of the Department of Public Relations; and Hartley F. Peart, general counsel.

Absent.—Dr. O. D. Hamlin.

1. **Call to Order.**—The meeting was called to order by the chairman, T. Henshaw Kelly.

2. **Hospital Service.**—Further discussion was had of the proposed hospital service plan. The general counsel submitted a proposed statement clarifying the service to be offered. After full consideration the statement was accepted for presentation to the House of Delegates, and the secretary was requested to have mimeographed copies made for distribution to the House of Delegates.

3. **Z. T. Malaby.**—Dr. Z. T. Malaby, member of the California Medical Association, advised the Council of his candidacy for governor on the Democratic ticket.

Doctor Harris spoke of the cooperation of Doctor Malaby in legislative matters, and it was agreed that Doctor Malaby would be introduced to members of the House of Delegates at the evening session.

4. **Nominees for Standing Committees.**—Dr. Robert Peers, chairman of the Special Committee on Nominees for Standing Committees, submitted the report of his committee. After full discussion, the membership of the standing committees was designated as follows:

<i>Committee on Associated Societies and Technical Groups</i>		
William W. Roblee (Chairman).....	Riverside	1937
Clifford Sweet.....	Oakland	1935
William H. Geistweit.....	San Diego	1936
<i>Committee on Extension Lectures</i>		
Robert T. Legge, (Chairman).....	Berkeley	1937
James F. Churchill.....	San Francisco	1935
J. Homer Woolsey.....	Woodland	1936
Secretary ex officio.		
<i>Committee on Health and Public Instruction</i>		
Fred B. Clarke (Chairman).....	Long Beach	1935
W. R. P. Clark.....	San Francisco	1936
Benjamin W. Black.....	Oakland	1937
<i>Committee on Hospitals, Dispensaries, and Clinics</i>		
Daniel Crosby (Chairman).....	Oakland	1936
John C. Ruddock.....	Los Angeles	1935
Karl L. Schaupp.....	San Francisco	1937

Committee on History and Obituaries			
George D. Lyman (Chairman)	San Francisco	1937	
Charles D. Ball	Santa Ana	1935	
J. Marion Read	San Francisco	1936	
Secretary ex officio.			
Editor ex officio.			
Committee on Industrial Practice			
Morton R. Gibbons (Chairman)	San Francisco	1935	
Mott H. Arnold	San Diego	1936	
Harry E. Zaiser	Orange	1937	
Committee on Medical Defense			
George G. Reinle (Chairman)	Oakland	1935	
Fred R. DeLappe	Modesto	1936	
John P. Nuttall	Santa Monica	1937	
Committee on Medical Economics			
John H. Graves (Chairman)	San Francisco	1935	
William R. Molony, Sr.	Los Angeles	1936	
Willard Stone	Pasadena	1937	
Committee on Medical Education and Medical Institutions			
Loren R. Chandler (Chairman)	San Francisco	1936	
George Dock	Pasadena	1935	
John B. Doyle	Los Angeles	1937	
Committee on Membership and Organization			
Harry H. Wilson (Chairman)	Los Angeles	1935	
Dewey R. Powell	Stockton	1936	
Thomas H. McGavack	San Francisco	1937	
Secretary ex officio.			
Committee on Publications			
Percy T. Magan (Chairman)	Los Angeles	1937	
Ruggles A. Cushman	Talmage	1935	
Frederick F. Gundrum	Sacramento	1936	
Secretary ex officio.			
Editor ex officio.			
Committee on Public Policy and Legislation			
Junius B. Harris (Chairman)	Sacramento	1935	
Fred R. DeLappe	Modesto	1936	
E. T. Remmen	Glendale	1937	
President ex officio.			
President-elect ex officio.			
Committee on Scientific Work			
J. Homer Woolsey	Woodland	1935	
F. M. Pottenger	Monrovia	1936	
Lemuel P. Adams	Oakland	1937	
Secretary of Section on General Medicine.			
Secretary of Section on General Surgery.			
Emma W. Pope (ex officio), chairman.			

5. **Guest Speakers.**—The secretary advised that the Northern Dental Association had extended an invitation to Morris Fishbein to address its next session and that Dr. Fishbein had agreed to accept provided the medical profession invited him to address that organization at the same time.

Action by the Council.—On motion duly made, seconded and carried, the following resolution was adopted:

Resolved, That the Northern Dental Association's request be referred to the Council for consideration at the May meeting.

Doctor Gibbons brought to the attention of the Council the fact that when speakers were invited from outside the state many of the local communities invited them to speak in the various localities at local meetings and that in many instances the expenses of such visits had to be borne by the guest speakers, who believed that the acceptance of the invitation of the State Association obligated them to address local units.

The Council agreed that in inviting guests it should be clearly stated that they were not obligated to accept an invitation from local groups throughout the state.

The secretary reported that one of the invited guests, in order to be present at the session in time for his program, had to come by airplane at an additional expense to that authorized by the Council.

Action by the Council.—On motion of Ullmann, seconded by Schaupp, the following resolution was adopted:

Resolved, That Dr. Russell Cecil be reimbursed for the amount of additional expense entailed by airplane transportation.

Discussion was had of the expense incurred by invited guests for meals to and from the annual session.

Action by the Council.—On motion of Gibbons, seconded by Harris and unanimously carried, the following resolution was adopted:

Resolved, That invited guests to the annual session be allowed a per diem of \$5 for expenses while traveling to and from the place of their residence to the place of the annual session.

6. **Adjournment.**—There being no further business the meeting adjourned to meet at 8:30 a. m. Thursday.

T. HENSHAW KELLY, *Chairman.*
EMMA W. POPE, *Secretary.*

Minutes of the Two Hundred and Twenty-Sixth Meeting of the Council of the California Medical Association

The following minutes were approved by the Council at its two hundred and twenty-sixth meeting, held at Mission Inn, Riverside, on May 3, 1934.

Held in the Alhambra Room, Mission Inn, Riverside, Thursday, May 3, 1934, at 8:30 a.m.

Present.—Doctors Clarence G. Toland, president; Robert A. Peers, president-elect; Edward M. Pallette, speaker; T. Henshaw Kelly, chairman of Council; Karl L. Schaupp, chairman of the Executive Committee; Councilors W. W. Roblee, C. R. Howson, H. J. Ullmann, F. R. DeLappe, A. L. Phillips, C. E. Schoff, H. S. Rogers, Harry H. Wilson, C. O. Tanner, W. H. Kiger, M. R. Gibbons, J. B. Harris; C. A. Dukes, chairman of the Committee on Public Relations; Emma W. Pope, secretary-treasurer; George H. Kress, editor; Walter M. Dickie, director of the Department of Public Relations; and Hartley F. Peart, general counsel.

Absent.—Dr. O. D. Hamlin.

1. **Call to Order.**—The meeting was called to order by the chairman, T. Henshaw Kelly.

2. **Minutes of the Council.**—The minutes of the 222nd, 223rd, 224th, and 225th meetings of the Council were presented by the secretary, and on motion duly made, seconded and carried, were approved.

3. **Election of Chairman of the Council.**—Doctor Kelly stated that the next order of business would be the election of a chairman of the Council for the ensuing year. Doctor Kelly then asked the vice-chairman, Morton R. Gibbons, to take the chair. Doctor Gibbons took the chair and called for nominations for a chairman of the Council.

T. Henshaw Kelly was nominated chairman of the Council by William H. Kiger of Los Angeles; such nomination was seconded by Alfred L. Phillips. Robert Peers moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by Charles A. Dukes.

The secretary cast the ballot and the chairman *pro tem* announced the election of T. Henshaw Kelly as chairman of the Council for the ensuing year. Doctor Kelly then took the chair.

4. **Election of Vice-Chairman of the Council.**—Morton R. Gibbons was nominated by Carl R. Howson as vice-chairman of the Council for the ensuing year; such nomination was seconded by Harry H. Wilson. William H. Kiger moved that the nominations be closed and the secretary be instructed to cast the ballot; such motion was seconded by Clarence Toland, and carried.

The secretary cast the ballot and the chairman announced the election of Morton R. Gibbons as vice-chairman of the Council for the ensuing year.

5. **Executive Salary Contracts.**—The chairman announced that, pursuant to the approval of the report of the Committee on Survey of Expenditures by the House of Delegates, the executive salary contracts will have to be on a monthly basis.

6. **Election of Secretary-Treasurer.**—Emma W. Pope was nominated by Robert A. Peers as secretary-treasurer; such nomination was seconded by Morton R. Gibbons. Alfred L. Phillips moved that the nominations be closed, and the chairman cast the ballot; such motion was seconded by Clarence G. Toland, and carried.

The chairman cast the ballot and announced the election of Emma W. Pope as secretary-treasurer of the Association.

7. Election of the Editor.—George H. Kress was nominated by Charles A. Dukes as editor of the JOURNAL; such nomination was seconded by Carl R. Howson. Alfred L. Phillips moved that the nominations be closed and the secretary cast the ballot; such motion was seconded by Henry Ullmann, and carried.

The secretary cast the ballot, and the chairman announced the election of George H. Kress as editor of the JOURNAL.

8. Election of Director of the Department of Public Relations.—As provided in the by-laws, Charles A. Dukes, chairman of the Committee on Public Relations, recommended the appointment of Walter M. Dickie as director of the Department of Public Relations.

Walter M. Dickie was nominated director of the Department of Public Relations by Charles A. Dukes; such motion was seconded by William W. Roblee. Morton R. Gibbons moved that the nominations be closed and the secretary be instructed to cast the ballot. Such motion was seconded by Alfred L. Phillips, and carried. The secretary cast the ballot, and the chairman announced the election of Walter M. Dickie as director of the Department of Public Relations.

9. Appointment of General Counsel.—On motion of Ullmann, seconded by Kiger and unanimously carried, Hartley F. Peart was appointed general counsel of the Association.

10. Appointment of Associate General Counsel.—On motion of Ullmann, seconded by Gibbons and unanimously carried, Hubert Morrow was appointed associate general counsel of the Association.

11. Appointment of Three Members of Cancer Commission.—President Clarence G. Toland stated that he recommended for appointment on the Cancer Commission, for a term of three years, Charles A. Dukes, chairman; Alson R. Kilgore, secretary; and Lyell C. Kinney, vice-chairman. The appointments were approved by the Council.

12. Interim Committee on Health Insurance.—Carl R. Howson, member of the Interim Committee on Health Insurance, presented his resignation, stating that since this committee paralleled a senate committee, a member having closer contact with the southern senator was desirable.

On motion of William H. Kiger, seconded by Charles A. Dukes, the resignation of Carl R. Howson as a member of the Interim Committee was accepted.

13. Date of Next Council Meeting.—The chairman stated that in accordance with a provision of the by-laws a meeting of the Trustees Of The California Medical Association would be held on May 26, 1934.

Action by the Council.—On motion of Rogers, seconded by Ullmann and unanimously carried, the following resolution was adopted:

Resolved, That the date of the next meeting of the Council be set as May 26, 1934.

14. Reports of Cancer Commission.—The secretary stated that the Cancer Commission was desirous of publishing reprints of the various reports of the Cancer Commission, which had appeared in CALIFORNIA AND WESTERN MEDICINE since 1932.

Doctor Pope stated that the James H. Barry Company had submitted an estimate of \$210 for one thousand copies, and \$98 for each additional one thousand copies.

Action by the Council.—On motion of Ullmann, seconded by Dukes and unanimously carried, the following resolution was adopted:

Resolved, That the request of the Cancer Commission for publication of collected reports in reprint form be approved and that a sum not to exceed \$1000 be appropriated to the Commission.

15. Committee on History and Obituaries.—It was pointed out that the House of Delegates, through the

report of the Reference Committee on Reports of Officers and Standing Committees, had authorized the Council to appropriate not to exceed \$300 for use by the Committee on History and Obituaries.

Action by the Council.—On motion of Ullmann, seconded by Gibbons and unanimously carried, the following resolution was adopted:

Resolved, That the sum of not to exceed \$300 be allocated to the Committee on History and Obituaries.

16. Resignation of Delegate to the American Medical Association House of Delegates.—Carl R. Howson, delegate to the American Medical Association House of Delegates for the 1934 session, stated that it would be impossible for him to attend the session and that his alternate, Edward M. Palette, would also be unable to attend.

On motion of Rogers, seconded by Harris, the resignation of Carl R. Howson as delegate to the American Medical Association session of 1934 was accepted.

On nomination of Edward M. Palette, seconded by Charles A. Dukes, Clarence G. Toland of Los Angeles, was elected delegate to the 1934 session of the American Medical Association to represent the California Medical Association.

17. Basic Science Law.—Discussion was had of the action of the House of Delegates approving the principle of a qualifying certificate act and recommending that the Council take such action as it deems advisable.

Action by the Council.—On motion of Kress, seconded by Gibbons and unanimously carried, the following resolution was adopted:

Resolved, That the Committee be continued and that it be instructed to submit a report to the Council at its meeting on May 26, including a draft of a proposed bill and recommendations of the committee.

18. Legislation.—Discussion was had of the proposed constitutional amendment which would place district attorneys under the jurisdiction of the Attorney-General. No action taken.

19. Report of Committee on Physical Therapy.—The report of the Committee on Physical Therapy was presented.

Action by the Council.—On motion of Ullmann, seconded by Dukes and unanimously carried, the following resolution was adopted:

Resolved, That the report of the Committee on Physical Therapy be accepted.

20. State Emergency Relief.—Discussion was had of the plan for state emergency relief, and the request for an appointment of a committee in the north to work in conjunction with the committee in the south.

It was agreed that the present committee should handle the matter with power to appoint a subcommittee if desired.

21. Councilor Visits.—Discussion was had of topics for discussion before county societies by councilors, and on motion of Gibbons, seconded by Peers, the following resolution was adopted:

Resolved, That the councilors be sent a digest of topics for discussion at county society meetings.

The problem of malpractice was then discussed in detail, and it was agreed that this should be stressed by councilors on all visits.

The value of having resolutions to be presented before the House of Delegates in the hands of all delegates prior to the annual session and, if possible, having them published in the JOURNAL so that they could be discussed by county societies, was brought up.

Action by the Council.—On motion of Kress, seconded by Palette and unanimously carried, the following resolution was adopted:

Resolved, That the chairman of the Council and the general counsel prepare amendment to cover the submission of resolutions, so that the matter may be discussed at the next annual session.

It was stated that councilors should explain the danger of "unit voting" by delegations.

Action by the Council.—On motion of Ullmann, seconded by Kress, the following resolution was adopted:

Resolved, That the secretary be instructed to notify all county societies two months prior to each annual session that if they contemplate submitting resolutions to the House of Delegates, a copy should be sent to the State Association office that it may be published and discussed by county societies prior to action by the House of Delegates.

Action by the Council.—On motion of Gibbons, seconded by Peers and unanimously carried, the following resolution was adopted:

Resolved, That copies in galley form of the minutes of the present session be sent all councilors.

Further topics for councilors' visits were the county hospital problem and the institution of county institutions commissions, racketeering and hospital associations with special reference to coöperation with district attorneys, legislation and relief work, medical service plans.

It was stated that a mimeograph should be available at annual sessions so that the resolutions presented to the House of Delegates could be mimeographed and copies given to delegates.

22. Medical Service Plans.—The question of the status of hospital service plans which are contemplated or established by county societies and the use of the data collected by the State Association was discussed.

Action by the Council.—On motion of Wilson, seconded by Gibbons, the following resolution was adopted:

Resolved, That the Council of the California Medical Association authorize the general counsel and the Public Relations Committee to make available the plans and information necessary to assist in the organization of hospital insurance corporations financed and operated by accredited hospitals under conditions whereby professional services may not be sold and/or rendered by such insurance corporations except under conditions approved by the board of directors or similar governing body of each county society in which such plan may be operative, subject also to the approval of the Public Relations Committee of the California Medical Association; such assistance to be available only when approved by the Executive Committee, the General Counsel, and the Public Relations Committee.

23. Pasteurization of Milk.—Doctor Gibbons stated that the American Medical Association, through one of its departments, stated that it favored the pasteurization of milk, including certified raw milk, and that in California certified raw milk is safe.

On motion of Gibbons, duly seconded, the following resolution was adopted:

Resolved, That the delegates to the American Medical Association be instructed to enlist the aid of the Section on Pediatrics or other interested groups and take such action as may be necessary in their discretion to restore the standing of certified raw milk in California.

24. Minutes of the Council.—Minutes of the two hundred and twenty-sixth meeting of the Council were then approved.

25. Past Officers' Breakfast.—Doctor Rogers stated that he felt it would be desirable to have a luncheon or breakfast at each annual session for past officers.

Action by the Council.—On motion of Kress, seconded by Dukes, the following resolution was adopted:

Resolved, That the program of each annual session carry an announcement of a past officers reunion and that the general past officers be notified of the event.

It was agreed that a breakfast would be the most suitable occasion for the reunion.

26. Adjournment.—There being no further business the meeting adjourned.

T. HENSHAW KELLY, *Chairman.*

EMMA W. POPE, *Secretary.*

COMPONENT COUNTY MEDICAL SOCIETIES

ORANGE COUNTY

The regular meeting of the Orange County Medical Association was postponed one week because of the State convention at Riverside, and was held on May 8 at 8 p. m. in the chapel of the Orange County Hospital.

The first readings of the applications of Doctors Francis Findlay of Santa Ana and Charles F. Kohlenberger of Fullerton were heard.

Eulogies were read on Dr. Frank Ashmore, who died as a result of an accident on April 30, and Dr. William B. Wood, who was a charter member of the local association and demitted from here thirty-four years ago. He passed away on February 26.

The Economics Committee reported a satisfactory working agreement with the Employees' Association of the Southern Counties Gas Company. In the future, surgical cases, whenever possible, will be taken care of locally, and not sent to a central hospital in Los Angeles.

Convention reports of the delegates to the California Medical Association at Riverside were heard.

Doctor Violet, in a stirring talk on the charter members of the local society, suggested that a portion of the next meeting be set aside to honor the two living charter members who are active. These men are Doctors C. D. Ball and J. P. Boyd.

The scientific program of the evening was in charge of Dr. K. H. Sutherland, Orange County public health officer. He introduced the speaker of the evening, Dr. W. P. Sheppard, who chose as his subject *The Doctor and the Public Health Officer*. His talk was very well received by those present.

WALDO S. WEHRLY, *Secretary.*



PLACER COUNTY

The Placer County Medical Society met on March 31 at the Freeman Hotel, in Auburn.

Following the reading of correspondence and attention to routine business, President Barnes introduced Dr. Langley Porter, dean of the medical department, University of California, who addressed the society upon *The University of California Medical School and the Practitioner of Medicine*.

Doctor Porter gave a summary of the history of the Medical School since its inception in 1862 up to the erection of the splendid modern out-patient department in 1933. He made reference to many of the eminent men who gave their lives in the furtherance of medicine in California through the University Medical School. Naturally, he dwelt on great names—Dr. H. H. Toland, the founder of the school, and Doctor Blake, the first professor of obstetrics, whose genius made some of the first contributions of the relation of chemical constituents to physical action and who, also, was one of the first proponents of open-air treatment of tuberculosis.

Dean Porter went on to present to the society the policies which govern the activities of the Medical School and the great advantage to the Medical School of a university affiliation. He emphasized that the Medical School held itself to be a state servant and wished to bring the latest and most authoritative medical knowledge to the service of the state. It attempts to do this by offering physicians of the state a consultation service which they may extend to patients who are unable to meet the fees of a private consultant.

Any physician may send such patients to the University out-patient department, with an outline of the patient's history and a statement of his financial status. It was emphasized that the University's budget was extremely restricted and the actual costs must be charged. In no case is the fee more than the actual "out of pocket" cost to the University for the work. As these cost items range from 25 cents to \$7 for a complete gastro-intestinal series, the patient can usually defray them.

The speaker pointed out that no greater calamity could befall any community than to have the economic integrity and moral authority of the practicing physician destroyed. Through this consultative service, it is hoped to maintain the authority of the doctor by showing his patients that he, himself, is able to bring to their aid the most modern medical science, through his affiliation with the University of California Medical School. During the period of consultation the patient remains under the direction of his own physician and, in this way, the doctor will maintain his patient as a loyal friend and a paying client when circumstances are better.

It was also suggested that no better form, and certainly no less expensive form, of postgraduate education could be brought to the physician than this in which the medical school helps to solve direct problems for practitioners. A full report of the findings, after a complete study of the patient's difficulties is made, is sent to the referring doctor. He may also have whatever advice he may ask in regard to the further care of his patient. Should the physician desire to refresh himself on pertinent literature, the Medical School packet library service will provide appropriate reading matter. It is interesting to know that this service is reaching nearly every county in northern California, and the demands for it have tripled within the last two years and are still increasing.

Dean Porter expressed some anxiety that the profession might feel that the interests of the practicing doctor were not properly cared for by the clinic, and that people who were financially competent to pay a doctor's fee were admitted to the clinic. He showed the society the social service technique by which applicants found to be financially capable were excluded from the clinic. It would seem very difficult for persons to elude the vigilance of the workers and obtain medical relief. The administrative authorities are certain that not over one or one and a half per cent escape their scrutiny. However, the University usually accepts patients for the consultative service if they have a physician's statement of their needs. Only very rarely is the physician's knowledge of the patient's economic status in fault.

At the present time, this particular consultation service can be given only to ambulatory patients coming to the out-patient department. Patients and friends may obtain lodging in the neighborhood at extremely low price, and there are a number of inexpensive restaurants in the vicinity.

Due to the small number of beds and restricted budget, there is little opportunity to care for patients who need hospitalization. While the Medical School is anxious to coöperate with its colleagues and help them deal with such problems, it can only do so if arrangements are made prior to the arrival of the patient to the hospital. It is embarrassing to the administration and unfair to the patient to have him arrive without previous notice and to have no bed to allot the sufferer. It is urged that any physician desiring the hospitalization of such a patient write, telephone or telegraph to Dr. W. E. Carter, director of the out-patient department, University of California Hospital, Fourth and Parnassus avenues, San Francisco, Montrose 3600, and make arrangements for the admission of the patient.

Invitation was extended to the members present and to any other physicians who might be interested to attend the Grand Rounds held by the various departments at 9 a. m. in Toland Hall, University of California Hospital. These rounds are as follows: Tuesday, gynecology; Wednesday, medicine; Thursday, pediatrics; and Friday, surgery.

Physicians are also invited to attend the clinical pathological conference held on Wednesday from 11 a. m. to 12 noon in Toland Hall, University Hospital.

Attention was called to the semi-annual alumni day to which all physicians are welcome, whether graduates of the University or not. Twice a year the Medi-

cal School has a home-coming day, to which the alumni and other physicians who are interested are invited to attend the program of special clinics arranged for that day.

In closing, Dean Porter added that the Medical School would be happy to have any physician come at any time to visit the wards and participate in the work of the University hospital or out-patient department.

The president then introduced Dr. Amos U. Christie, instructor in pediatrics, University of California Medical School, who addressed the society on *Heart Disease in Children*.

Doctor Christie stated that the alarming increase of heart disease has made people heart-conscious. More than half of all heart disorders begin in childhood, and pediatricians should be well qualified to discuss them. About one per cent of school children have organic heart disease, and 15 to 20 per cent of this number have congenital malformations, occurring very rarely as single anomalies. In order of incidence they are patent intraventricular septum, patent ductus, pulmonary stenosis, and aortic stenosis—coarctation.

Explanation of etiology is still unsatisfactory, but from study of ninety complete autopsies (13 per cent Mongolian idiots and 46 per cent with multiple anomalies) the author believes may be due to defective germ plasm. Fifteen to 17 per cent develop subacute bacterial endocarditis. Treatment should be symptomatic, hygienic and dietary, with removal of foci of infection.

Rheumatic fever was discussed from the point of view of incidence, nature of disease, etiology, predisposing causes, focal infections, pathology, and types of infection. Prognosis depends on recurrence of attacks, amount of damage, and care given to the child. The condition of the heart muscle is important and nodules and pericarditis are bad signs. Treatment must consist of bed rest, general hygienic measure, diet, constant search for foci; while drugs, deep x-ray therapy, etc., are of lesser importance. Education of mother and child to the above points and a proper psychological attitude are most important.

The most difficult to diagnose are the borderline cases with no characteristic history of acute rheumatism and no definite evidence of cardiac abnormality, but with signs of heart disease. This group with functional heart murmurs constitutes 3.9 per cent of cardiac suspects. A functional heart murmur is a disturbance not due to a demonstrable lesion, but is a reflection of trouble elsewhere in the body, such as an acute infection leading to dilatation from overwork, direct actions of toxins on heart muscles, severe malnutrition or fatigue or disturbances of rate and rhythm often on a psychogenic basis. The differential points in the diagnosis of functional heart disease were discussed.

Electrocardiograph and x-ray are of greater educational value to the physician than of practical value to the patient though they are often a great aid in diagnosis.

Therapy for children with heart disease consists (1) of a careful and adequate explanation to mother and patient as to the nature of the ailment; (2) a regulation of the child's every daily activity, in accordance with his tolerance; (3) the working out of a regimen to insure the maximum of rest, which is the greatest therapeutic agent; and, finally, the gradual rehabilitation for the growing child in order to produce a strong heart muscle.

Doctor Christie's paper was discussed by Doctors Babcock, Porter, Peers, and Christie.

Dr. Dave Dozier of Sacramento announced that the next meeting of the California Northern District Medical Society would be held in Marysville on April 21, and extended a cordial invitation to all present to attend the meeting.

There being no further business the meeting adjourned and refreshments were served.

ROBERT A. PEERS, *Secretary*.

SAN BERNARDINO COUNTY

The meeting of the San Bernardino County Medical Society was held at Loma Linda on May 8 at 8 p. m. Dr. H. G. Gentry, vice-president, called the meeting to order.

A communication from the University of California regarding a course of training for public health officers was read.

The final reading of the proposed change in the by-laws was then given. This amendment will be voted on at the next meeting.

No change in nomination for president for the coming year was made, but Dr. A. E. Varden was nominated by Dr. Walter Pritchard and seconded by Dr. J. Patterson for secretary.

It was moved by Dr. W. Pritchard and seconded by Dr. Fred Moor that the president appoint a committee to write a letter of appreciation to the retiring secretary for his long service to the society.

The program of the evening was dedicated to public health, and Dr. Glen Myers was in charge.

The speakers were in the following order: Mr. Ben Read, executive secretary; Charles Reagan, D. D. S., secretary; John Barrow, M. D., C. G. Toland, M. D., and Percy T. Magan, M. D.

Following the discussions, Dr. A. E. Varden, president of our component county society, spoke briefly and a membership campaign was undertaken.

E. J. EYTINGE, *Secretary*.



SAN JOAQUIN COUNTY

The regular monthly meeting of the San Joaquin County Medical Society was held in the Medico-Dental clubrooms, in Stockton, on May 10.

The applications of Doctors Ralph G. Cressman and Verne R. Ross were reported on favorably, and were declared elected to membership in the medical society. The application of Dr. I. B. Thompson of Stockton was presented.

Dr. G. H. Sanderson and Dr. Dewey Powell reported on the meetings of the House of Delegates at Riverside.

Dr. Harry Kaplan presented the following resolution:

"WHEREAS, The San Joaquin County Medical Society feels that at the present time there is an unparalleled opportunity before the medical profession of the state to publicly exhibit its ability and its willingness to act courageously and effectively in meeting social and economic problems; therefore be it

"*Resolved*, That the San Joaquin County Medical Society put itself on record as being entirely in accord with the proposed medico-economic survey of the state of California, voted by the House of Delegates of the California Medical Association; and be it further

"*Resolved*, That by reason of its experience in this field that this society be accorded representation on the state committee to be formed for the purpose of conducting the above-mentioned survey."

The adoption of this resolution was moved by Dr. G. H. Sanderson and seconded by Doctor Kaplan. Dr. Dewey Powell, in the discussion of this resolution, stated that he was in favor of the resolution with the exception of the final paragraph, which would necessitate, if adopted by the state society, that either he or Doctor Sanderson would have to close his office for a period of several months and that neither one could afford to do this. He made the following motion in the form of an amendment to and in lieu of the final paragraph of Doctor Kaplan's resolution: "and be it further *Resolved*, That the San Joaquin County Medical Society, through its experience in the study of economic problems of the state, stands ready to offer any aid or counsel to the state committee," and asked that the San Joaquin Society be kept in close contact with this committee. This was seconded by Doctor Sanderson. The amendment was then voted

and passed, and the resolution was voted on and passed.

The scientific program was then given by Lieutenant Commander H. W. Miller, M. C., United States Navy, who spoke on the *Medical Aspects of the Last Nicaraguan Campaign*. This was a very interesting paper, the Commander's experiences with the Guardia Nacional being the basis of his paper. This was discussed by Doctors Dozier, Barton, Powell, Sr., and Dewey Powell.

There being no further business the meeting was adjourned and refreshments were served.

G. H. ROHRBACHER, *Secretary*.



SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held on Monday evening, May 14, in the Bissell Auditorium of the Cottage Hospital, with President Markthaler presiding.

The speaker of the evening was Dr. Rafe C. Chaffin of Los Angeles, who gave a talk on his operation, *The Vaginal Subtotal Hysterectomy for the Cure of Procidencia*, accompanied by talking moving pictures.

This was discussed by Doctors Loveren, Johnson, L. Eder, Brown, and Mollath.

Doctor Gray reported that each member of the society had been furnished with a fee list, to be used during the trial period.

It was moved, seconded and carried, that Doctor Gray, as chairman for the Medical Economics and Costs of Medical Care Committee, draw up a public statement of their report, which would be given to the Public Relations Committee for publicity.

Doctors Ullmann and Freidell both gave reports of the State meeting.

Doctor Markthaler reported on the County Dispensary, and that they expected to have a social worker by June 1.

The transfer card of Dr. R. McGovney from Los Angeles County was read and upon ballot he was unanimously elected to membership.

WILLIAM H. EATON, *Secretary*.



SISKIYOU COUNTY

On April 29 a meeting of the Siskiyou County Medical Society was held at the home of Doctor Bathurst, in Etna. The meeting was held in honor of Doctor Bathurst's eightieth birthday, and the completion of his fifty-seventh year of the practice of medicine in Siskiyou County. Doctor Bathurst is hale and hearty, and still conducts an active practice, answering calls many miles away, crossing the Salmon mountains, where snow is twenty-eight to forty feet deep in winter, and the only means of travel is by mules wearing snowshoes.

Edwin William Bathurst was born in Gawlar, South Australia, April 30, 1854. He received his schooling in Noumea, New Caledonia, Liverpool, England, and was graduated from the Medical College of the Pacific in San Francisco in 1877. He began his practice in Sawyers Bar in 1877 and moved to his present location in Etna in 1882.

The members were greatly interested in many stories of pioneer practice. Doctor Bathurst told of long horseback rides, ski and snowshoe trips, to see patients. The longest call he spoke of took a week to make. There was snow and sleet at the beginning of the trip and he traveled on skis over one range of mountains to catch a stage which took him to Montague, thence by train to Delta, then by wagon and horseback over another range of mountains to Carville to see a patient with endocarditis. On another trip his horse gave out and he was forced to abandon him, finishing the journey taking turns riding and walking with his guide. Arriving at last, he found his patient with both hands blown off by a black-powder cap, the stumps already partly gangrenous. Taking one of the

bystanders as his anesthetist, he did a double amputation just below the elbows. The patient died some hours later. The livery stable tried to collect for the horse, which was eventually returned by a runner, and the patient's relatives objected to paying the fee of \$75 which the doctor asked.

Doctor Bathurst owned the first stethoscope and probably the first clinical thermometer in the country. An amputation set, obstetrical forceps, and what medicines he could carry completed his equipment. He made the observation that while modern medicines are refined and infinitely better than those of his early days, still nearly all are based on the old "saddle bag" drugs.

He told of an epidemic of diphtheria in one settlement where there were over one hundred cases in less than two months. The town smelled so of diphtheria that the odor could be detected half a mile away. There was, of course, no antitoxin, and treatment consisted of massive doses of tincture of iron—twenty drops every two or three hours. If the membrane soon blackened, the patient lived. There was a mortality of between 5 and 10 per cent. One of the fatal cases was in a baby who developed a membrane in a chafed place on the neck. The epidemic was so severe that a keg of butter became infected and smelled of diphtheria.

He told of interesting Indian customs: he was called to see an Indian woman recently delivered, but the placenta had not arrived. He found the umbilical cord tied to the mother's leg, "to keep the liver from eating up the baby if it should go back inside." Another Indian treatment was for smallpox. The patient was placed in a small hut and a hot fire built. When the patient was perspiring freely, he was forced to run out and plunge into the icy Klamath River. There was usually a funeral in a few days.

While Doctor Bathurst is proud of his early experiences, he is a very modern physician. He keeps well read on current literature, and uses modern methods of treatment and diagnosis. He is active of mind and body, and looks forward to years of active practice. He scoffed the idea of retiring, saying that he expected to die in harness.

Doctors Langer, Pius, Haines, McCann, McGuire, Cole, Vidrickson, Newton, Seeley, McVicker, Dickinson, and Campbell were present to wish Doctor Bathurst a happy birthday.

J. ROGER U. CAMPBELL, *Secretary*.

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SOLANO COUNTY

The regular meeting of the Solano County Medical Society was held at the Hotel Casa de Vallejo on Tuesday evening, May 8, at eight o'clock. This meeting was held jointly with the members of the Napa-Solano County Dental Association, and was voted as one of the most successful affairs held in the history of the Solano County Medical Society.

Starting at eight o'clock sharp, seventy-two members of both societies sat down to dinner and were entertained by the Columbian Squires orchestra, led by Bernard Klotz, son of the late Dr. Bernard J. Klotz of Vallejo and former president of the Solano County Medical Society. Following dinner the members were addressed by Dr. B. F. Coleman of San Francisco, on the subject of *Focal Infection from a Dental Standpoint*. This talk was illustrated by lantern slides. In his talk Doctor Coleman stressed the early diagnosis and complete treatment of all oral focal infection.

The second address of the evening was delivered by Dr. Anthony Diepenbrock, chief of the medical staff at St. Mary's Hospital in San Francisco, on *Focal Infection from a Medical Standpoint*. This paper was perhaps one of the most instructive papers ever delivered before the Solano County Medical Society.

Commander C. W. Ross, chief of the medical staff of the naval hospital on Mare Island, opened the discussion following the delivery of the two papers.

Immediately following this speaking program the members were honored by short addresses on *The Public League of California* by Doctors Alson R. Kilgore and Glenn F. Cushman, both of San Francisco. These men outlined the functions and purposes of the Public Health League and advised formation of a local unit. A committee, consisting of Dr. J. Edward Hughes, representing the Solano County Medical Society, and Dr. Carson Magill, representing the Napa-Solano Dental Association, was appointed to plan for the formation of such unit and to report to their respective societies at their next regular meetings.

Special guests at the meeting and dinner were: Dr. H. S. Rogers of Petaluma, councilor of the California Medical Association; Commanders Ross, Laning, and Carson; Lieutenants Prehm and Peters, all of the naval hospital on Mare Island; Dr. Allen McGrath of Sonoma, Dr. C. Leggo of Crockett, Dr. Robert Peachey of San Francisco; Mr. Orvin Gaston and Mr. James Ritch, representing the Vallejo press.

The next regular meeting of the Solano County Medical Society will be held at the Hotel Casa de Vallejo, in conjunction with the Contra Costa County Medical Society, on Tuesday evening, June 12, in Vallejo.

On that evening Dr. J. M. Toner, Director of State Institutions, Dr. Howard C. Naffziger, chief of the department of surgery at the University Hospital, and Dr. Junius B. Harris of Sacramento will be special guests of the evening.

AMBROSE J. RYAN, *Secretary*.

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SONOMA COUNTY

The Sonoma County Medical Society held its May meeting as guests of Dr. F. O. Butler, medical superintendent of the Sonoma State Home, on the evening of the 10th.

Dr. E. J. Finnerty, president of the society, presided, and the following guests and members were present: Doctors F. O. Butler, J. W. Green of Vallejo, D. C. Smith, R. V. Harr, P. C. Barrett, R. Colvin, C. O'Connor, Josephine Williams, Henrietta Frederickson, P. A. Meneray, J. L. Spear, A. A. Thurlow, Chester Marsh, H. C. Honor, V. O. Honor, C. B. Andrews, H. S. Rogers, J. W. Seawell, A. M. Bowles, H. S. Gossage, S. Z. Peoples, A. G. Lumsden, M. L. Lewis, Kathleen Morris, E. Vieira, W. C. Shipley.

After a delightful dinner the regular order of business was dispatched, and Doctor Butler of the Home outlined the evening's program. He then introduced Dr. R. V. Harr of the staff, who made a survey of the crippled inmates of the Home and demonstrated some of the work being done to correct their handicaps and produce patients that could be of some assistance to themselves and others.

Dr. P. C. Barrett was introduced and gave a summary of the tuberculosis situation among the inmates and what was being accomplished by treatment and segregation.

Both Doctors Harr and Barrett were complimented on the thoroughness of their work by those present.

W. C. SHIPLEY, *Secretary*.

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VENTURA COUNTY

The regular monthly meeting of the Ventura County Medical Society was held at the County Clinic building of the Ventura County Hospital on Tuesday, April 10.

Doctor Drace, program chairman, had secured as guest speakers, Dr. A. Bower and Dr. Robert Meals of the staff of the Los Angeles County Contagious Hospital. They gave a most interesting and instructive talk on the *Treatment of Contagious Diseases*. A good discussion followed.

An application of Doctor Livingston for retired membership rating in the state society was voted on and passed.

FRED A. SHORE, *Secretary*.

CHANGES IN MEMBERSHIP

New Members (24)

Los Angeles County.—Thomas H. Barlow, George T. Burke, David H. Kling, Morris B. Lerner, Harold A. Mourer, John P. Naughton, John A. Pearson, Walter R. Pendleton, E. H. Welcome, I. E. Wolfson.

Orange County.—Harold Clifford Neslund.

Riverside County.—Leonard Dexter Wood, Raymond L. Johnson.

Sacramento County.—Anthony Ralph Boscoe, Mamie G. Pallesen.

San Diego County.—Bruce H. Brown.

San Francisco County.—Frederick S. Bruckman, Alma S. Pennington, Andrew M. Ryan.

San Mateo County.—H. A. Clattenburg.

San Luis Obispo County.—Elmer J. Chesbro.

Siskiyou County.—W. C. McBride.

Sonoma County.—Leonard W. Kines.

Stanislaus County.—Olley D. Ellefson.

Transferred (5)

Oliver K. Malcolmson, from Riverside County to Los Angeles County.

Arne E. Ingels, from Alameda County to San Francisco County.

Elmer W. Smith, from San Francisco County to Marin County.

James H. Van Vorhis, from Fresno County to Kings County.

John A. Wallace, from Orange County to Imperial County.

Resigned (5)

Henry C. Babcock, from San Diego County.

Howard A. Ball, from San Diego County.

Howard H. Dignan, from San Francisco County.

Amelia L. Gates, from San Francisco County.

Joseph Shiang-Min Lee, from San Francisco County.

In Memoriam

Ashmore, Frank. Died at Santa Ana, April 30, 1934, age 49. Graduate of University of Illinois College of Medicine, Chicago, 1914. Licensed in California in 1915. Doctor Ashmore was a member of the Orange County Medical Society, the California Medical Association, and the American Medical Association.

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Biggs, Elmer LeRoy. Died at Los Angeles, May 6, 1934, age 60. Graduate of Dunham Medical College, Chicago, 1901, and licensed in California the same year. Doctor Biggs was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

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Eaton, George Lee. Died at San Francisco, April 25, 1934, age 61. Graduate of Vanderbilt University School of Medicine, Nashville, 1894, and licensed in California the same year. Doctor Eaton was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

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Elliott, Addison Eugene. Died at San Diego, April 9, 1934, age 59. Graduate of Rush Medical College, Chicago, 1908. Licensed in California in 1915. Doctor Elliott was a member of the San Diego County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

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Franklin, John Henry. Died at Guadalupe, April 23, 1934, age 54. Graduate of the University of California Medical School, 1906, and licensed in California the same year. Doctor Franklin was a member of the

Santa Barbara County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

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Montgomery, Alexander Boyd. Died at Long Beach, March 11, 1934, age 59. Graduate of Rush Medical College, Chicago, 1897. Licensed in California in 1919. Doctor Montgomery was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

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Reynolds, Ralph W. Died at Pasadena, April 17, 1934, age 65. Graduate of the Cleveland Pulte Medical College, 1902. Licensed in California in 1910. Doctor Reynolds was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

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Stiles, William H. Died at San Bernardino, March 25, 1934, age 81. Graduate of Hahnemann Medical College and Hospital, Chicago, 1878. Licensed in California in 1886. Doctor Stiles was a retired member of the San Bernardino County Medical Society, the California Medical Association, and the American Medical Association.

OBITUARIES

Frank Ashmore

1885-1934

Frank Ashmore, the unfortunate victim of an accident, passed away at the Santa Ana Valley Hospital on April 30. His father and grandfather, Baptist Missionaries in China during the fifties, did much for China, one of them translating the Bible into Chinese.

Frank Ashmore was born in Swataw, China, January 5, 1885. He was educated at Mayon Park Academy, Chicago, Denison University, Granville, Ohio, B. S. in 1908, and University of Illinois, M. D., in 1914. He was an assistant surgeon with rank of lieutenant in the Navy during the Great War. Immediately after the war he located in Buena Park, California, where he remained a short time, and removed to Santa Ana in 1921.

Doctor Ashmore received his California certificate to practice in the state in 1915. He became a member of the Orange County Medical Association in 1920. He was a member of the California Medical Association and a Fellow of the American Medical Association. He is survived by his widow, Ethel Mae (Thrasher) Ashmore, and his son and daughter. Doctor Ashmore had many friends, who deeply regret his demise.

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William Bell Wood

Dr. William Bell Wood was born in St. Joseph, Missouri, August 21, 1851. He was a graduate in medicine from the Missouri Medical College in 1875. He practiced in Springdale, Kansas, until he located in Orange in 1887. There he at once became a leader not only in medicine, but in town affairs. Doctor Wood assisted materially in county division that occurred on June 4, 1889. Eight days later when the Orange County Medical Association was formed, he was one of the active workers, one of the thirteen physicians who organized the society of which he was president in 1900.

Doctor Wood was a surgeon of ability, specializing in rectal surgery. Notwithstanding his success and popularity in Orange, he removed to Los Angeles in 1900 and later to South Pasadena, where he died February 26 at the advanced age of eighty-three. He had many friends, who mourned his loss.

Doctor Wood married Jennie L. Moore on March, 1887, and there are several living descendants.

He was an active Mason while residing in Orange. Although Doctor Wood demitted from the Orange County Medical Association thirty-four years ago, he should not be forgotten, for in the pioneer days he was of invaluable assistance to the society just beginning to operate.

CANCER COMMISSION*

Report of Committee on Cancer of the Rectum, Anus, and Rectosigmoid

Cancer of the rectum, anus, and rectosigmoid constitute about 12 per cent of all cancer in the human body, and about 80 per cent of intestinal cancers. The frequency of cancer in this region lays a great responsibility upon the physician to investigate carefully all cases presenting any symptoms referable to the intestine or rectum. On the whole, these cases are discovered relatively late. Nearly a year elapses, on the average, after symptoms have begun before a correct diagnosis is made.

There are several reasons why these cancers are not discovered earlier; and some of these reasons are:

1. Patients put off coming to the doctor for any rectal symptoms as long as they can, because they have been told by others that an examination of the rectum is a very painful procedure. Adequate examination can be carried out, however, without causing suffering, and physicians should devote particular attention to alleviating this fear.

2. The general impression that blood from the rectum means hemorrhoids. Physicians, students, nurses, and the public should be taught that blood from the rectum means cancer, until cancer is ruled out.

3. Very frequently patients resort to rectal suppositories and go on for months with this treatment, when a careful examination would have revealed cancer many months before.

4. Inadequate examination of the patient. In over 90 per cent of rectal cancer a simple, digital examination will reveal the growth. This fact adds force to the dictum of a well-known professor of medicine who said to his students: "Put your finger in the rectum, or you may later find you have put your foot in it." Adequate examination includes the following and should be done in the order named: inspection, digital, anoscopic, sigmoidoscopic up to ten inches, and barium enema if the lesion is not found within the range of the sigmoidoscope.

PATHOLOGY

This résumé of pathology of rectal cancer is condensed from the Lettsonian lecture of W. Ernest Miles, F. R. C. S., delivered before the Medical Society of London, February 19, 1923.

The type of carcinoma occurring in the rectum and rectosigmoid is adenocarcinoma. There are three clinical varieties differing in physical characteristics and degree of malignancy, namely, the papilliferous, the common adenoid carcinoma, and the colloid. The papilliferous type resembles an ordinary simple papilloma, extends rapidly upon the surface and soon involves the whole circumference of the bowel. Owing to the exuberance of the growth, the lumen of the bowel becomes obstructed before infiltration of the muscular coat has progressed to any marked degree. Consequently, these growths are not particularly malignant, and seldom give rise to extramural metastases unless they have been in existence for a considerable time.

The great majority of cancers of the rectum are of the common adenoid type. Usually, the surface of the growth is a flattened tumor which increases in size in all directions; and although at first freely movable upon the muscular coat, soon becomes adherent to it. This occurs, probably, within a few months. As the growth increases, surface ulceration occurs and bleeding begins. As more of the circumference of the bowel becomes involved, the ulcer deepens and assumes a crater-like form with nodular, everted, and indurated

edges. These growths commonly encircle the entire circumference of the gut in from twelve to eighteen months. The colloid or mucoid type of carcinoma is merely a degenerative stage of the preceding variety.

The papilliferous type is the least malignant of the three, the colloid type the most malignant and practically always recurs, while the common adenoid type usually occupies a middle ground as regards malignancy.

Cancers originating in the anal canal are of the true squamous cell type.

Cancer of the rectum may spread in any of three distinct ways, namely, by direct extension through continuity of tissue, by way of the venous system, and by means of the lymphatic system.

Direct extension through the muscular coat of the bowel appears to be a slower process. When the bowel wall has been penetrated, the growth invades the perirectal fat, through which it extends until it reaches the fascia propria of the rectum. The fascia propria is not usually invaded until the growth has existed long enough for more than three-quarters of the circumference of the ampulla to have been encompassed. It is only after penetration of the fascia propria that invasion of neighboring structures, such as the sacrum, uterus, or vagina, prostate or bladder, can take place.

There is no doubt whatever that cancer cells sometimes penetrate into the interior of small veins and, becoming detached, are carried into the blood stream. As the rectal veins belong to the portal system, cancer cells penetrating them are carried straight to the liver. It is fortunate that in rectal cancer dissemination by the veins is rare.

Infinitely more important is the dissemination of cancer cells through the lymphatic channels, and a knowledge of the lymphatic system is essential to the performance of any radical operation on cancer.

The direction in which the cells travel is largely influenced by the direction of the current in the lymphatics which have been invaded. It must be remembered, however, that the path by which the cells advance is not entirely controlled by anatomical considerations. Thus, it may happen that cancer cells derived from a growth in the rectum, wherever situated, may traverse the lymphatics in a downward, lateral, or upward direction, or in all three directions simultaneously. During the transit their progress may be arrested at any point in the region traversed by the lymphatics, and so lead to the formation of nodules. The various tissues through which the extramural lymphatics pass, therefore, are prone to metastatic deposit which is either macroscopic or microscopic in character. It may be regarded as an axiom that whenever a visible metastasis exists, other metastases, which cannot be recognized without the aid of the microscope, also exist along the course of the lymphatics, at points more distant from the seat of the primary growth.

The pelvic mesocolon, throughout its extent, is particularly liable to invasion. So often, indeed, is it found to be the seat of metastatic deposit that the removal of the whole of this structure in every operable case of cancer of the rectum is just as important as is thorough clearance of the axilla in breast cancer.

ETIOLOGY

By far the greater number of cancers of the rectum originate as benign adenomata. Rectal polyps present a consistent tendency to malignant degeneration. Most authorities agree that all polypoid growths of the mucosa should be considered as precancerous lesions. Any chronic inflammatory lesion may become malignant in susceptible persons. Ulcers, anorectal fistulae, hemorrhoids, and other lesions which are subjected to continuous irritation may develop malignant changes. Carcinoma may be engrafted on diverticulitis, or arise in postoperative scars. It is unusual for carcinoma to develop on hemorrhoids, but this does occur at times.

Rectal cancers display the same variations in degree of malignancy seen in carcinomas of other sites of

* The Cancer Commission was brought into being by the House of Delegates of the California Medical Association to aid in the furtherance of all efforts to combat cancer. The roster of officers and the central office of the Commission to which communications may be sent is printed in this issue of CALIFORNIA AND WESTERN MEDICINE (see front cover directory). This column is conducted by the Secretaries of the Commission.

origin, and the grade of malignancy is of special importance in estimating the probable chance of cure and frequently in determining treatment.

DIAGNOSIS

As with all other types of cancer, early recognition and early operation are the essential factors in cure. *Any change in bowel habit or sensation should cause the physician to suspect trouble.* The rectum is a comparatively silent area, and cancer usually causes little discomfort for the first six months; but even during this time there may be slight irritation or change in the character or frequency of the bowel movements. This is especially true in the papilliferous type, for this type grows rapidly and causes the secretion of considerable mucus. Tenesmus and urgent desire to defecate, with the passage of mucus, pus or blood alone, without feces, is often an early sign of cancer. During the early period there may be only a little discomfort in the rectum, or a little more frequent urge to defecation. These symptoms may be ignored by the patient, but if any of them are called to the attention of the physician an adequate examination should be made. When the lesion is at the rectosigmoid junction, rapid increase in constipation is a not infrequent symptom because the lumen of the gut is small and the growth constricts early. Distention by gas and colicky pains are also frequent complaints. If the abdominal wall be thin, peristaltic waves will probably be seen.

When blood appears in the bowel movement it should be an imperative command to the physician to immediately find where it comes from.

A physician cannot be held responsible for late diagnosis in patients who have failed to consult him until late in the course of the disease; but it is a sad indictment when months are allowed to pass after the patient has consulted the physician before a proper diagnosis is made.

Diagnosis of cancer of the rectum and recto-sigmoid is easily made in 100 per cent of the cases by digital, anoscopic and sigmoidoscopic examination; but this diagnosis cannot be made by laboratory examination of the stools and rarely by barium enema and x-ray unless the condition is far advanced and constriction present. It is altogether too common a mistake to rely on the x-ray to rule out rectal cancer. Lesions seven inches or more above the anus may be revealed by the x-ray, but not those in the rectum.

If hemorrhoids which are bleeding, or might bleed, have been found, the physician cannot be absolved from blame, if he does not investigate higher up and make sure that there is no other lesion from which the blood is coming.

A careful rectal examination should be made in all general examinations. It is just as important as a vaginal or nose and throat examination, and if routinely made much human suffering would be avoided. There is no reason why one body cavity should be routinely neglected, while every other cavity is examined in a general physical examination. Certainly every patient consulting the physician for any type of rectal trouble should have the benefit of routine sigmoidoscopic examination. If this were done, many cancers would be discovered early. Many unsuspected polyps would be seen and a considerable number of these would be found to be changing into early malignancy. If these small malignant polyps are removed with the electrocautery, most of them can be permanently cured.

BIOPSIES

Microscopic examination should be done in all cases to corroborate diagnosis and especially for the purpose of grading the malignancy of the growth, which has an important bearing upon the treatment to be instituted in the individual case. A small piece should be removed with a biopsy forceps, taking care to get a piece of the growth itself, and the wound immediately cauterized with the electrocautery. Done in this way the taking of a specimen does not increase the danger of metastasis and effectually prevents error in diagnosis. If a negative report is received and the lesion appears malignant to the examiner, a second specimen should be taken.

TREATMENT

Many factors must be considered in deciding just what treatment should be pursued. The age, sex, weight and general condition of the patient, the extent and location of the growth, the amount of fixation and obstruction, the presence or absence of metastasis or other disease, and the grade of malignancy are the more important factors. Discriminating judgment, gained only by experience, must be used if the best interest of the patient is to be conserved.

Many patients reach the surgeon in bad general condition due to partial obstruction with its attendant toxemia, interference with digestion and nutrition, dehydration, secondary anemia and perhaps associated chronic diseases such as diabetes, cardiovascular, and renal. With the careful coöperation of the internist, many who would otherwise be deemed inoperable can be improved to the point of becoming fair surgical risks.

Surgery and radiotherapy are the two methods of treatment which have proved to be of the greatest value.

There is no general agreement as to the status of radiotherapy.[†] Most authorities believe that it should only be used as a preoperative or postoperative adjunct to surgery; or in inoperable cases; or in the highly malignant cancers, graded high three or four, in which recurrence after surgery is the rule. Preoperative radiation may be given without loss of time following preliminary colostomy. The high grades of malignancy are fortunately often highly radiosensitive.

Some surgeons consider radiotherapy the treatment of choice in cancer of the anus, especially epitheliomas of high-grade malignancy. Those of grade one and two without palpable inguinal glands are best treated by radical operation in conjunction with radiotherapy.

The percentage of operability varies with the experience, judgment and skill of the surgeon, and also with his willingness to disregard his statistics sufficiently to give all border-line cases a chance for their lives. Some surgeons consider 30 per cent of the cases seen as operable, while others operate upon 60 per cent or more. Probably at least 50 per cent of the cases seen should be given the benefit of radical surgery.

TYPES OF OPERATION

A considerable variety of operative procedures have been advocated and are in use by surgeons today, in general falling into the following groups:

1. Posterior resection without colostomy.
2. Posterior resection, preceded by colostomy.
3. Abdominal perineal resection in one, two, or three stages.

The choice of procedure must vary with the size and location of the growth, condition and age of the patient, grade of malignancy, etc. The Committee does not feel in a position to attempt to establish any one procedure as standard in all cases. Any operation carried out in the hope of accomplishing cure must of necessity be a radical one and a major procedure from all points of view. Decision as to type of procedure should be made, and operation carried out only on the basis of special training and experience.

INOPERABLE CASES

Under the heading of inoperable cases are included not only those in which metastases, that cannot be removed have taken place—for example, to the liver as formed at exploration, and the local growth is so far advanced that complete removal is not feasible; but also those cases in which the condition of the patient's health, because of age or general condition, precludes a radical procedure. In such cases much comfort will be given the patient by an early colostomy. Miles says: "From my experience of these cases, I am convinced that as soon as carcinoma of the rectum is found to be inoperable, every day lost before resorting to colostomy is a day to the bad."

Following colostomy, deep x-ray therapy, and the application of radium are often very valuable palliative

[†] See report of Radiology Committee in CALIFORNIA AND WESTERN MEDICINE, December, 1932, page 409, and January, 1933, page 55.

procedures, and occasionally apparent cures have been obtained.

Cases which are considered inoperable because of fixation, which precludes removal, may become operable following colostomy and rest of the bowel. Much of the fixation is due to inflammatory exudate, and the side-tracking of the fecal stream, irrigation and cleanliness may cause enough resolution to render a large fixed tumor movable and removable.

Mention should be made of methods for the relief of intractable pain in late, inoperable growths, *e. g.*, sectioning of the presacral nerve and lumbar sympathetic chains, caudal canal injections, partial cordotomy, etc.

PROGNOSIS

Prognosis depends upon the stage of the disease, the grade of malignancy of the growth, and the percentage of operability. Obviously, those surgeons who operate only upon the most favorable cases will secure the largest percentage of five-year cures. One outstanding surgeon operating on 53 per cent of the cases seen reported 48 per cent five-year cures in those who survived the operation. This may be considered illustrative of what should be accomplished in the cure of cancer in this region.

SUMMARY

1. The symptomatology of cancer of the rectum is by no means constant. Any change in bowel habit or sensation should cause the physician to suspect trouble.
2. Bleeding from the bowel requires thorough investigation, even though hemorrhoids are present. Bleeding means cancer until ruled out.
3. Any complete physical examinations should include rectal examination.
4. Reliance cannot be placed on intestinal x-rays alone to rule out cancer. Anoscopic and sigmoidoscopic examination should be done first.
5. Diagnosis is easy when the proper examinations are performed.
6. Colostomy is essential to success in operative treatment in most cases.
7. Adequate radiation requires administration of a protracted (approximately four weeks) course of properly filtered and directed high voltage roentgen radiation, plus carefully filtered and applied radium radiation; and in the opinion of the Committee is of value in certain selected cases.
8. Adequate surgical removal requires extirpation of the primary growth, together with tissue in the upward lateral and downward spread zones.

2004 Four Fifty Sutter Building.

Committee on Rectal Tumors:

W. H. Kiger, <i>Chairman</i>	Clarence E. Rees
Harold Brunn	Dudley Smith
William H. Daniel	J. K. Swindt
William A. Glenn	Montague S. Woolf
Lyell C. Kinney	Alfred J. Zobel
A. J. Murrieta	
James F. Percy	

C. M. A. DEPARTMENT OF PUBLIC RELATIONS*

Economic Aspects of the County Hospital Controversy†

Although it is not widely discussed, the County Hospital controversy is developing into a serious economic problem. Not only is it perplexing the medical profession, but it is attracting the attention of the taxpayers. While the medical profession is directly con-

cerned with the social aspects of the problem, the taxpayers are wondering who is going to bear the financial burden.

Society long ago decreed that persons who were unable to provide themselves with hospital care, or who had no friends or relatives willing and able to provide it for them, should be cared for at public expense. California has adhered to this policy since the beginning of statehood. Today sixty-seven county hospitals and sanatoriums are operated for this purpose at an annual cost of over \$15,000,000. These institutions maintain approximately 12,837 beds, and last year an average of 10,842 bed patients were cared for within their walls.

The magnitude of these institutions can better be gauged by comparison with private or voluntary hospitals. Whereas, the 313 private hospitals, with their 15,830 beds, cared for an average of 8,841 patients, the sixty-seven county hospitals cared for an average of 10,842 patients, or 55 per cent of the total. Thus, well over half of our population is dependent upon charity when in need of hospital care.

The question now arises as to the proper function of a county hospital, and herein lies the controversy now under discussion. The difficulty centers around the question of who shall be admitted to these institutions. Shall they be used exclusively for indigents, or shall their doors be thrown open to the public in general? If they are to be used only for indigents, how shall the word "indigent" be defined? If they are to be used as community hospitals, what assurance has the taxpayer that collections from pay patients will be managed efficiently?

Originally, county hospitals were primarily almshouses for the sick and injured. Admissions were confined to persons who had no other choice in the matter. To enter a charitable institution was equivalent to falling off the bottom rung of the social ladder. Hence, the money spent on these hospitals was destined for a definite purpose, probably free from abuse.

In the meantime, conditions have changed. Government has extended its scope and has become more generous in the services it renders its citizens. Many of our county hospitals are as modern in design and equipment as our leading private hospitals. Occasionally they bear names which tend to conceal the fact that they are charitable institutions. Instead of people entering these institutions only as a last resort, they frequently seek loopholes through which they can "crash gates." Of course, conditions vary in different counties, no two being exactly alike in this regard.

In this connection, county hospitals may be classified roughly as follows:

1. Institutions having mediocre facilities which, because of their nature, do not attract patients who can afford to patronize private hospitals.
2. Institutions having modern facilities, but restricting admissions to indigents.
3. Institutions having modern facilities and maintaining liberal entrance requirements.

The first group is not a source of difficulty. Certain of the smaller counties maintain hospitals which are poorly equipped, and in which the service is unattractive enough to discourage persons who want to "get something for nothing."

Alameda County is typical of the second group. Its hospital for acute medical and surgical cases is strictly modern and offers high-class service. The management, however, adheres to a strict policy of limiting admissions to indigents.

The Kern County Hospital is typical of the third group. Its plant is strictly modern and it renders a service comparable to that rendered by private hospitals. Because of this fact, and also because of liberal admission requirements, the hospital is not restricted to indigents. It is reported that approximately 90 per cent of the hospital patients in this county are in the county hospital, leaving but 10 per cent in private institutions. Although a few patients pay for part or all of the cost of their care, the major part of the burden falls on the shoulders of the taxpayers.

* An open forum for progress notes on the department's activities and for brief discussions on medical economics. Correspondence and suggestions invited. Address Walter M. Dickie, Room 2039, Four Fifty Sutter Street, San Francisco. This column is conducted by the Director of the Department.

† This paper is written by John M. Peirce, Tax Counselor, California Taxpayers' Association.

The first two groups are not the subject of controversy at the present time. The latter group, however, constitutes a genuine problem and involves several important questions.

The first question concerns the legal status of the county hospital. One section of the Political Code states that boards of supervisors may operate county hospitals, but this particular section does not indicate what these institutions are to be used for. Another section of the code provides that counties are responsible for the care of indigents and the dependent poor. The exact wording of the law is somewhat vague and doubtless requires clarification.

An attempt has been made, however, to clarify this point by referring the matter to the courts.

In June, 1933, ten Bakersfield doctors filed suit against the Board of Supervisors of Kern County, seeking to restrain it from admitting pay patients to its County Hospital. On October 17, Judge Van Zante of the Superior Court of Kings County rendered a decision enjoining the Board from continuing this practice. His order stated that county hospitals were intended for indigents, psychopaths, habitual inebriates, narcotic addicts, and certain others specified by law. The case, however, has not been appealed to the higher courts, so that a final interpretation of the law is not yet available. In the meantime, other counties have continued to admit pay patients and otherwise liberalize their policies.

In November, 1933, for example, the Board of Supervisors of Stanislaus County passed an ordinance permitting the admission of pay patients to the Stanislaus County Hospital. The present plant is not large enough to accommodate an increased number of patients, and therefore the taxpayers were called upon to finance the construction of additional bed capacity. A bond issue was proposed for this purpose, but was defeated at the polls on December 19.

On November 27, 1933, the Board of Supervisors of San Joaquin County also adopted a similar ordinance. Patients will be admitted to the County Hospital on a full-pay, part-pay or free basis, depending on their financial status. Among other things, the ordinance states "... that there shall be no stigma of pauperism attached to the hospital service provided by the county of San Joaquin, and that such service shall be regarded, supported and utilized in the same democratic spirit which prevails with relation to any other public services operated, supported and maintained by public taxes."

In contrast to the above situation, the Board of Supervisors of San Bernardino County has made it very clear that its County Hospital is to be used for indigents exclusively. First, the Board discontinued the practice of admitting patients on a part-pay basis, which had led to an endless chain of complications. Second, the Board changed the name of the hospital from the San Bernardino General Hospital to the San Bernardino County Charity Hospital. This action on the part of the Board of Supervisors defines in the public mind the true purpose of the institution, and to date has saved the taxpayers in excess of \$100,000.

The conclusion to be drawn from the above-mentioned cases is that public officials do not agree as to the legal status of county hospitals. Practices vary because opinions vary. It appears, therefore, that the source of this confusion should be eliminated by appropriate legislation. If it is the will of the people that county hospitals be used exclusively for indigents, the law should indicate this fact specifically.

Herein lies a second question, namely, what constitutes an indigent. The average American family, for example, being supported from the income of a wage-earner, is generally able to afford moderate luxuries such as an automobile, a radio, confectionery, tobacco, cosmetics, and theater entertainment. Because of this fact, such a family cannot be considered as indigents or paupers. Yet, when this family requires hospital care, it usually has no compunction about seeking admission to the County Hospital to be cared for at

public expense, and to receive free professional service from local physicians and surgeons who donate their services to charity cases. It appears necessary, therefore, to provide a legal definition of the word "indigent" as nearly as this is possible. In any event, each case must be decided individually, but a legal guide would be helpful.

Perhaps the best definition now in use is that employed by the institutions of Alameda County. It is: "An indigent is any person for whom necessary hospital care cannot be provided by himself or his responsible relatives without depriving him or his family of the basic necessities of life." This definition is excellent, and being in capable hands it is operating satisfactorily.

The third question involves the matter of pay patients. Those who advocate operating county hospitals as community institutions, advance the argument that the taxpayers should not object to the admission of patients other than indigents, if such patients pay the cost of their care. Herein lie two fallacies. The first is that pay patients seldom, if ever, pay the entire cost of their care: the charges made usually cover only the actual operating cost. No consideration is given to overhead costs such as capital outlays, interest on the investment, depreciation, loss in taxes, etc. The second fallacy is that public officials are at times careless in collecting accounts receivable. They do not operate on a profit and loss basis. If the accounts of pay patients are not paid, the budget can be balanced through an appropriate tax levy.

In this connection, it is interesting to compare two counties, whose operating policies are similar but whose collections vary widely. According to official reports, San Luis Obispo County collected \$34,336 from pay patients in 1932-33, or the equivalent of 45 per cent of the total cost of operation. Kern County, however, collected only \$6,663 from pay patients, or but 2½ per cent of the cost of operating its hospital. Obviously, the taxpayers of Kern County are bearing too great a proportion of the bill.

The same situation exists in the case of state hospitals for the insane. Although these institutions are designed to serve the public in general, it is interesting to note that last year 86 per cent of the patients were free cases, while but 14 per cent were pay patients. In other words, the taxpayers paid 86 per cent of the bill, although it is a well-known fact that insanity is not confined to the dependent poor.

Perhaps the best solution to the County Hospital controversy is to confine the use of these institutions to providing free care for persons who cannot afford to buy it elsewhere. This was the original purpose of county hospitals, and this social responsibility can still be fulfilled by preserving this policy. The law should be clarified, however, so that there will be little room for opinion.

After the legal status of county hospitals is determined, some means must be developed whereby non-indigents will be discouraged from seeking free care at public expense. It seems inherently human for people to seek something for nothing. Moreover, the gambling instinct causes people to risk the consequences of law violation. Hence, legal requirements are not always a barrier to abuses. It seems that the best barrier would be one which will define in the public mind the purpose of tax-supported institutions.

Certain counties accomplish this by maintaining unattractive hospital service, not because they want to, but because their resources will not permit otherwise. Other counties enforce strict rules and regulations, which are very helpful but difficult to administer. One county, however, has employed a unique device. It has inserted in the name of its general hospital the word "charity." In brief, it has endeavored to impress upon the public mind that the institution is one rendering public charity exclusively. It has been its experience that people will make a strenuous attempt to finance their hospital care themselves rather than to seek charity, since the name of the institution implies this fact.

In conclusion, it appears that a solution to the County Hospital controversy must include, among others, the following important steps: First, the legal status of tax-supported institutions must be clearly defined; and, second, public psychology must be employed to discourage the abuse of tax-supported institutions. The taxpayers, the medical profession, and private hospital administrators should cooperate in the achievement of these ends.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION *

MRS. PHILIP SCHUYLER DOANE President
MRS. ELMER BELT.....Editor and Chairman of Publicity

Component County Auxiliaries

Los Angeles County.—The Auxiliary here in Los Angeles County is including in the general spring cleaning, which always afflicts these lovely months, a thorough collecting of all sample bottles and capsules of the vitamin-bearing oils, such as cod-liver combinations. These samples, which descend rather heavily in every physician's mail from time to time, are being gathered from home and office and taken in charge by Mrs. Paul A. Quaintance, who mothered this very excellent idea. Through a Parent-Teacher Association chapter, the guardian of several schools in the city's less fortunate districts, these will be given to the malnourished children for their use in the closing weeks of the school year. The crop of bottles and small boxes already garnered is a lusty one. With little effort and at no expense, these valuable, health-giving oils have been saved and brought to the aid of many needy children.

April's regular meeting was held at the Orthopedic Hospital, where Dr. Charles Leroy Lowman and other staff members graciously welcomed more than a hundred and fifty of our members. Lunch was served in Memorial Hall, with the wives of the staff doctors as hostesses. Dr. H. D. Barnard gave a fascinating talk in which he sketched some of the feats of modern orthopedic surgery, and told stories of the fine fighting courage of the handicapped to win their way to health. Small groups were taken through all the various departments of this beautifully housed and excellently equipped institution. To those whose first visit this was it was an education in medical achievements, to the others a renewing of inspiration gained from the knowledge of the services of scientific medicine.

During the month the Auxiliary's officers, chairmen and committee men spent a delightful day, beginning with a barbecued lunch at the country home of Mrs. Rafe Chaffin on the shore of Lake Sherwood.

MRS. ELMER BELT, *Corresponding Secretary.*

Orange County.—The May meeting of the Orange County Medical Association Auxiliary was held at the home of Mrs. Paul Esslinger of San Juan Capistrano on the afternoon of Tuesday, May 8.

The business session was opened by the president, Mrs. Huffman.

Following the business meeting, Mrs. F. E. Coulter read an account of the history of our organization, which will be sent to the newly appointed state historian, Mrs. Langdon.

* As county auxiliaries to the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. A. Elmer Belt, editor and chairman of the Publicity and Publications Committee, 2200 Live Oak Drive, Los Angeles. Brief reports of county auxiliary meetings will be welcomed by Mrs. Belt and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate one page in every issue for Woman's Auxiliary notes.

The members then heard the reports of the various meetings and social gatherings of the convention at Riverside. Reports were given by the following delegates: Mesdames Harry Huffman, G. W. Olsen, E. J. Steen, F. E. Coulter, and G. I. Sellon.

The guests were entertained by a musical program given by Mrs. Hoblitzell, soprano, and Miss Horrell, pianist, both of San Juan Capistrano. Both artists delighted their listeners with their musical ability and the charmingly informal manner in which the numbers were offered.

A delightful tea hour was then enjoyed, served by the hostesses, Mesdames Paul Esslinger, Arthur Robbins, Lawrence Cameron, and F. H. Gobar.

ELIZABETH M. SUTHERLAND, *Secretary.*

San Diego County.—The Woman's Auxiliary to the San Diego County Medical Society received two generous gifts in April for the Crippled Children's Pool Fund. Mr. George Marston, local merchant, donated \$100, and Mrs. Thomas Sharp, Coronado society matron, gave a check for \$50. The Auxiliary plans to raise the total balance in the fund, including these two contributions, to \$300 by the end of June.

A smart benefit musicale was given on April 17, and a benefit bridge has been scheduled for June. The April affair was held in the palatial studio of Mrs. Russell Keeney. Three prominent local artists gave their services for the afternoon: Mrs. Margaret Barkelew Nobles, soprano; Mr. Eugene Price, concert pianist; and Mrs. Ritza Freeman Reardon, literary reviewer. Following their splendid program, refreshments were served to the members and their guests. Others who contributed to the success of the event were: Alice Barnett Stevenson, Frye & Smith, printers, and the Hillcrest Printers.

* * *

Members of the Woman's Auxiliary to the San Diego County Medical Society enjoyed a very worthwhile program at the May meeting. The delegates to the state convention at Riverside gave brief reports of each session. The organization was proud to learn that Mrs. Charles Howard had been elected second vice-president of the state, and Mrs. Willard Newman was elected district councilor for the first district. Dr. Lyle Kinney reviewed *Pending Legislations*, and stressed that the Auxiliary's responsibility in the coming primaries was to campaign for legislators who are friendly to measures that will better public health and scientific medicine. The second guest speaker was Dr. C. E. Sisson, County Hospital superintendent, who delighted the group with his talk on *The Origin of Hospital Day*.

ELIZABETH EAGER, *Secretary.*

* * *

Amendments to the Constitution of the Woman's Auxiliary to the California Medical Association, Approved at Riverside Annual Session, May, 1934

Article III. Members. Change to read:

Section 1. (a) The membership of this auxiliary shall consist of active, associate, honorary, and members-at-large.

(b) Active membership shall consist of members in good standing in the component county auxiliaries.

(c) Associate membership shall consist of members who are wives of interns, or wives of members of the United States Army and Navy Medical Corps.

(d) Honorary membership may be conferred only by the Board of Directors upon those women to whom a particular tribute is deemed desirable.

Add:

Section 2. (b) Women otherwise eligible to membership whose husbands practice any art of healing not recognized by the medical profession shall be ineligible to membership.

Article V. Board of Directors.

Section 3. Add as sub-paragraph (c) to Section 3. The president of each county auxiliary may attend meetings of the Board of Directors and shall be duly notified by the

secretary of the time and place at which such meeting shall be held. Such presidents shall have neither voice nor vote in the proceedings of the board.

Article VII. Duties of Officers.

Section 2. Add to end of this paragraph:

It shall be her duty to encourage the active organization of county auxiliaries throughout the state.

Section 3. The second vice-president shall be the chairman of the Health Education and Program committees.

Add to this section:

It shall be her duty to outline suggested programs and to assist county program chairmen in developing programs suited to their needs.

Section 4. Change to read:

The recording secretary shall record the minutes of all meetings, and shall perform such other duties as are outlined in the handbook for state auxiliaries, published by the Woman's Auxiliary to the American Medical Association.

Section 5. Add to this section:

She shall present at the annual meeting a report duly audited by an accredited or certified public accountant.

Section 6. Add as subparagraph (b):

The corresponding secretary shall be chairman of Credentials and Registration.

Add as subparagraph (c):

It shall be the duty of the corresponding secretary to send to the national president, immediately following the annual meeting, twelve copies of the list of newly elected officers and members of the state board.

Section 9. Add as:

All duties of all officers shall include the duties of officers as set forth in the handbook for state auxiliaries as revised November, 1933.

Article VIII. Standing Committees.

Section 1. Change to read:

The auxiliary shall carry on its major activities through the following standing committees, the chairman of each of which (unless otherwise provided for in the Constitution) shall be appointed by the president, subject to the approval of the Board of Directors:

- Membership and Organization;
- Health Education and Program;
- Finance;
- Public Relations;
- Public Health Activities;
- Editor and Publicity;
- Hygeia;
- Convention.

Section 3. Change to read:

(a) The duties of the Committee on Membership and Organization shall be to encourage the active organization of county auxiliaries throughout the state.

(b) The duties of the Committee on Health Education and Program shall be to outline programs and to assist the program chairman of county auxiliaries in developing programs suited to their respective needs.

(c) The Finance Committee shall consist of three members, the chairman (appointed by the president), the treasurer and the retired treasurer. This committee shall prepare the annual budget and present same to the board for its approval at the pre-convention meeting, before final submission to the House of Delegates.

(d) The Committee on Public Health Relations shall be the liaison between the auxiliaries and all other organizations. This committee shall foster and encourage all matters looking to the advancement of medical science.

(e) The Committee on Public Health Activities shall seek information concerning public health activities with a view toward coöperating in the promotion of acceptable health measures.

(f) Editor and Publicity. It shall be the duty of this committee to edit the auxiliary department in CALIFORNIA AND WESTERN MEDICINE, and to file all suitable material for the Archives. This committee shall prepare all public notices and articles for the press and shall send duplicate copies of all outstanding items of interest to the national publicity chairman. This committee shall be the custodian of the State Scrap Book and shall prepare all state national exhibits of same.

(g) The Hygeia Committee shall be responsible for subscriptions to Hygeia magazine and shall coöperate in the program outlined by the national Hygeia chairman.

(h) The Convention Committee shall be responsible for the details of convention entertainment and program, and shall work in conjunction with the president in all plans. This committee shall prepare and present for approval at the February meeting of the board a tentative program for the annual meeting. The Convention Committee shall be responsible for all pre-convention publicity.

Article IX. Nominations and Elections.

Section 3. Add as subparagraph (b):

Two or more delegates shall constitute adequate district representation.

Add as subparagraph (c):

If through lack of adequate representation of a district at the annual meeting there is a vacancy in the councilorship, this vacancy shall be filled by the board at its first meeting.

Article X. Delegates.

Section 4. Change to read:

The Board of Directors of each county auxiliary shall elect its delegates and alternates from its active membership list, and shall forward list of same to the state treasurer. Each county auxiliary secretary shall distribute the proper credential cards, which shall have been issued by the state corresponding secretary, to both delegates and alternates, and shall return the duplicates, properly signed, to the state corresponding secretary.

Section 5. Add as:

Vacancies occurring in any county delegation may be filled by the chairman of said delegation.

Section 5, as it now reads, to be known as Section 6.

Section 6, as it now reads, to be known as Section 7.

Article XI. Meetings.

Section 4. Insert as:

The registration fee for all members at the annual meeting shall be one dollar for each member.

Article XII. Dues. Section 3. Omit.

Article XIII. County Auxiliaries.

Section 3. Change to read:

The wives and mothers, adult sisters, adult daughters and adult granddaughters, and the wives of members in good standing of a county medical society (active, associate or honorary) only shall be eligible to membership in the county auxiliary. Women having the degree of M. D. or a degree for any art of healing not recognized by the State Medical Association, shall be ineligible to membership.

Section 8 (b). Change to read:

The fiscal year of all county auxiliaries shall correspond to the calendar year.

Section 9. Change to read:

Names of all delegates and alternates shall be filed in the office of the state treasurer thirty days prior to the annual meeting. The name of the chairman of the delegation shall be indicated.

Section 11. Add as subparagraph (b):

Immediately following each annual election the corresponding secretary shall forward two copies of the list of newly elected officers to the state president.

Standing Rules:

(1) Fifteen days' time from the date of the postmark on the secretary's notice shall be allowed for the return of the ballots.

(2) The nine district councillors shall be the representatives of the state auxiliary in their respective districts, and shall be members of the state committee on Membership and Organization. It shall be their duty to lend all possible assistance for the coördination of the work of the auxiliary, and to visit each auxiliary in their respective districts at least once a year. They shall render to the delegates at the annual meeting a written report of the activities of their respective organizations during the preceding year.

NEVADA STATE MEDICAL ASSOCIATION

D. A. SMITH, Mina	President
E. E. HAMER, Carson City.....	President-Elect
J. N. VAN METER, Las Vegas	First Vice-President
W. H. FROLICH, East Ely	Second Vice-President
HORACE J. BROWN, Reno.....	Secretary-Treasurer

COMPONENT COUNTY MEDICAL SOCIETIES

WASHOE COUNTY

The Washoe County Medical Society held its regular monthly meeting at the State Building, Reno, on May 8, Doctor Paradis presiding.

The report of the committee, Doctor Harper, chairman, of the contemplated children's clinic was read. The committee recommended a children's clinic to be held at the new Washoe General Hospital. All children applying for treatment to be investigated with reference to their financial status. Treatment to be given to indigent children only. The clinic to be held under the auspices of the Washoe County Medical Society and to work in coöperation with the Nevada

Public Health Association. The main effort of the clinic is to be directed toward the early detection and treatment of tuberculosis.

Next was read a letter from Mrs. F. E. Humphrey, secretary of the Board of Trustees of the Washoe General Hospital, stating that a suitable room would be put at the disposal of the clinic in the new hospital.

A letter from Dr. and Mrs. George R. Smith requesting the presence of the physicians of the society to join with the Woman's Auxiliary at a dinner at their home at 5:30 p. m. on June 12. The secretary was instructed to communicate this invitation to all members of the society.

A communication from Dr. Horace J. Brown, secretary of the Nevada State Medical Society, was read relative to the notices sent out by the secretary of the county society. In part, the communication was as follows: "It has been brought to my notice that a series of resolutions have been proposed to the Washoe County Medical Society regarding references of various changes in the by-laws, etc. The proposer of these resolutions cannot do this legally by reason of the fact that he is not a member of the state society, having been suspended for non-payment of dues April 1, 1933. The Washoe County Medical Society is a component part of the Nevada State Medical Society and a member of the county society is automatically a member of the state society by the payment of county and state society dues." Under the circumstances which showed that the notices were out of order by reason of the fact that the technical point required membership in both county and state societies, the matter was ordered laid on the table.

The business of the evening being finished, the speakers of the evening, Doctors Byron H. Caples and J. Park Tuttle, were called upon to present their papers. Doctor Caples' paper on *Hematuria* was most excellent and well received. His first sentence is epigrammatic. "Hematuria is a symptom, not a disease." In enumerating some of the known causes for hematuria, Doctor Caples cited the following:

"1. Blood conditions such as hemophilia, purpura, jaundice, leukemia, and scurvy.

"2. The acute fevers such as scarlet, typhoid, malaria, and smallpox, and certain drugs such as urotropin given in large doses or over a long period of time. Also turpentine and cantharides.

"3. Certain nervous diseases, as tabes, multiple neuritis, and hysteria.

"4. In the kidney: trauma, nephritis, stone, tuberculosis, syphilis, tumors, embolism, and infarct, thrombosis of the renal veins, aneurysm of the renal artery, varices, arteriosclerosis of the renal vessels, chronic passive congestion, bleeding from the sudden emptying of a distended bladder, hydronephrosis, pyelitis, and movable kidney. There are still others. One I should like to mention, calcium oxalate showers, which may produce a fairly brisk hematuria.

"5. In the ureter: trauma, stone, tuberculosis, neoplasms, varices, ureteritis, and stricture.

"6. In the bladder: trauma, neoplasms, cystitis, stone, tuberculosis, varices, ulcer, and parasitic diseases.

"7. In the prostate: trauma, hypertrophy, neoplasms, stone, and infection.

"8. In the urethra: trauma, urethritis, stone, and neoplasms."

In conclusion, the doctor spoke of the relationship between hematuria and newgrowths. Quoting from a recent paper by Rathborn of the Long Island City Hospital, "In fifteen hundred urological patients applying for treatment, two hundred and three were hematuria. In this group there were one hundred and six cases of tumor, eighty-eight of which were malignant." The concluding thought of the paper was in 50 per cent of all cases with involvement of the genito-urinary tract, hematuria is produced by tumors and the greater part of the tumors are malignant.

Doctor Tuttle followed with an x-ray exhibition of many various and anomalous types of the ureters.

Also exhibited many specimens recently removed of kidney and prostate and vesical stones. He made a running comment on pictures and specimens, all of which was appropriate to the cases cited.

Following this, the society was entertained by cinemas furnished by Davis & Geck, suture manufacturers, of Brooklyn, New York. The cinemas were works by Londsley and Young, showing the technique of perineal prostatectomies. Also a cinema showing the use of the ribbon suture in closing wounds of the kidney for various types of stones removed. The society tendered its thanks to Messrs. Davis & Geck for their courtesy in lending the films for exhibition.

THOMAS W. BATH, *Secretary*.

So-Called Thymic Death.—Waldboott studied the pathologic changes in twelve cases of what has been termed "thymic death," four of which occurred during ether anesthesia. He observed features that indicate a marked resemblance to anaphylactic death as it is observed following injections of pollen and serum. He has collected a series of cases of human anaphylactic shock following the administration of substances other than protein and demonstrated that any substance which produces allergic symptoms, whether it contains protein or not, may also produce human anaphylactic shock, provided three conditions are fulfilled: an extreme degree of sensitivity, a dose above the patient's tolerance, and a rapid absorption of the antigen. The clinical manifestations are the same, no matter what the material that causes the shock. He believes that the best known evidences of sensitization to cocaine, procaine and similar chemicals are cutaneous manifestations, particularly in the form of contact dermatitis and urticaria. The author concludes that all allergic patients to be operated on should be tested for the anesthetic which is to be administered, and that a clinical test consisting of the inhalation of the general anesthetic or a previous administration of the local anesthetic, well diluted, should be made. A conjunctival test consisting of the application of a diluted solution of the local anesthetic into the conjunctival sac may aid in the discovery of sensitization. With a local anesthetic, special caution should be exercised to prevent an accidental intravenous injection. With the exception, perhaps, of the synthetic ephedrine, there is no drug known at present that prevents anaphylactic shock other than epinephrine. Such drugs should be given with every application of a local anesthetic. The retardation of the absorption of the anesthetic through its vasoconstrictive action, as well as the ability of epinephrine to counteract the basic lesion of anaphylaxis, namely, capillary dilatation, accounts for the beneficial effect of this drug in anaphylaxis.—*Archives of Otolaryngology*.

Thyrototoxicosis.—Bogart states that all nontoxic goiters requiring treatment for cosmetic reasons or because of pressure should be treated surgically. Nontoxic adenoma in persons more than thirty years of age is best removed surgically on account of the chance of malignant change. Malignant thyroids are best treated by radiation alone. Toxic adenoma can be cured by irradiation, but is best treated by surgery because of the quicker results. Mild and moderately toxic goiters are easily and efficiently treated surgically because results can be more quickly obtained, but it should be remembered that these cases can also be treated by radiation and that in many of them equally good end-results are obtained. When associated diseases or economic or social reasons make operation inadvisable, a four months' trial of radiation is justified and gratifying results are often obtained. In extremely toxic cases in which operation would endanger life, irradiation will often prove effective in clearing up the symptoms, and when a cure cannot be produced the case may be rendered operable. Irradiation is justified in patients who refuse operation.—*Tennessee State Medical Association Journal*.

MISCELLANY

Under this department are ordinarily grouped: News; Medical Economics; Correspondence; Twenty-five Years Ago column; Department of Public Health; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings

American Medical Association, Cleveland, Ohio, June 11-15. Olin West, M. D., Secretary, 535 North Dearborn Street, Chicago, Illinois.

American Association for the Study of Goiter, Cleveland, June 7-9. J. D. Yung, M. D., Secretary, 670 Cherry Street, Terre Haute, Indiana.

North Pacific Pediatric Society, Vancouver, B. C., June 18. R. H. Somers, M. D., Secretary, 1305 Fourth Avenue, Seattle, Washington.

Pacific Northwest Medical Association, Salt Lake City, June 21-23. C. W. Countryman, Secretary, 407 Riverside Avenue, Spokane, Washington.

Utah State Medical Association, Salt Lake City, June 21-23. Leland R. Cowan, M. D., Secretary, 305 Medical Arts Building, Salt Lake, Utah.

Medical Broadcasts*

American Medical Association Health Talks.—The American Medical Association broadcasts on a coast to coast network each Monday afternoon from 4 to 4:15 central daylight saving time (4 o'clock eastern standard time, 3 o'clock central standard time, 2 o'clock mountain time, and 1 o'clock Pacific standard time).

The Association broadcasts on a western network of the Columbia Broadcasting System each Thursday afternoon on the Educational Forum from 4:30 to 4:45 central standard time.

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San Francisco County Medical Society.—The San Francisco County Medical Society broadcasts every Tuesday from station KJBS, 11:15 a. m., and over station KFRC, 1:15 p. m.

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Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of June is as follows: Saturday, June 2—KFI, 9 a. m. Subject: Health Talk. Saturday, June 2—KFAC, 10 a. m. Subject: Your Doctor and You.

Tuesday, June 5—KECA, 11:15 a. m. Subject: Health Talk.

Saturday, June 9—KFI, 9 a. m. Subject: Health Talk. Saturday, June 9—KFAC, 10 a. m. Subject: Your Doctor and You.

Tuesday, June 12—KECA, 11:15 a. m. Subject: Health Talk.

Saturday, June 16—KFI, 9 a. m. Subject: Health Talk. Saturday, June 16—KFAC, 10 a. m. Subject: Your Doctor and You.

Tuesday, June 19—KECA, 11:15 a. m. Subject: Health Talk.

Saturday, June 23—KFI, 9 a. m. Subject: Health Talk. Saturday, June 23—KFAC, 10 a. m. Subject: Your Doctor and You.

Tuesday, June 26—KECA, 11:15 a. m. Subject: Health Talk.

Saturday, June 30—KFI, 9 a. m. Subject: Health Talk.

Saturday, June 30—KFAC, 10 a. m. Subject: Your Doctor and You.

* County societies giving medical broadcasts are requested to send information as soon as arranged (giving station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

Some Important State Election Dates:

June 23—Last day upon which candidates for office may file their nominations.

July 17—Last day for filing initiative petitions. One hundred and eleven thousand valid signatures are required to place an initiative measure upon the ballot.

July 18—Last day for registration for the primary election.

August 28—Primary election.

September 27—Last day of registration for the general election.

November 6—General election.

Query—Are you registered?

State of Washington Eradicates Bovine Tuberculosis.—In recognition of the success of the state of Washington in eradicating tuberculosis from its cattle, the United States Department of Agriculture has designated that state as a modified accredited area. This designation, effective May 1, 1934, signifies that the state has reduced the infection to less than one-half per cent of all its cattle, as indicated by official tuberculin testing. Washington is the fourteenth state to win this recognition. The states already modified accredited are: North Carolina, Maine, Michigan, Indiana, Wisconsin, Ohio, Idaho, North Dakota, Nevada, New Hampshire, Utah, Kentucky, and West Virginia.

Illness Among Working People During 1929-1933.—According to the Milbank Memorial Fund, the number of physicians' calls to sick working people was cut by one-sixth during the period 1929 to 1933, while the percentage of illnesses hospitalized increased considerably during the same period, and the amount of free care, both from hospitals and physicians, soared to a very high point, according to a first-hand census to determine the relation between sickness and the depression made jointly by the United States Public Health Service and the Milbank Memorial Fund.

The survey consisted of a house-to-house canvass of 6,686 wage-earning families comprising 29,000 individuals, residing in Baltimore, Birmingham, Cleveland, Detroit, New York, Pittsburgh, and Syracuse. After the investigators had turned in their findings, the families were classified into three groups, namely, "poor," comprising those with annual incomes averaging less than \$150 per person; "moderate," those with \$150 to \$424 per person; and "comfortable," those with \$425 or more per person per year. Families with downward shifts in income since 1929 from one class to another were compared with families who experienced no loss of income. As a check these results were also compared with findings for families in similar income levels by the Committee on the Costs of Medical Care for the period 1928-1931, and it is indicated that only about 52 per cent of the cases of illness received some medical care, whether from doctor or hospital, in 1933 as against 68 per cent in 1928-1931, the difference amounting to a drop of 23½ per cent. However, hospitalization taken by itself showed a rise of about 14 per cent for this period, being given to about 7.4 per cent of the illnesses in 1933 as against 6½ per cent in 1928-1931.

Medical Study Trip to Hungary.—At the invitation of the Hungarian Medical Postgraduate Committee of Budapest, a medical study trip to Hungary is being organized. The plans provide for a fortnight visit to Hungary during which there will be postgraduate lectures and demonstrations in English at the principal university clinics and at the municipal thermal baths and springs. Reduced railroad fares and hotel rates are granted by the Hungarian Government. The party will sail from New York on August 18, 1934, visiting Munich and Oberammergau en route. The return trip may be made, optionally, via Berlin, Paris, or Italy, arriving back in New York on September 30.

American physicians of good standing are invited to join. The American Committee of the study trip has as its secretary, Richard Kovacs, M. D., 1100 Park Avenue, New York, from whom information may be obtained.

Thomas Jefferson and Vaccination.—“Vaccination was first applied by Dr. Edward Jenner in 1789 for smallpox. A dozen years later, shortly after ascending the presidency in 1801, President Jefferson caused members of his family to be vaccinated, thus throwing in his influence with medical progressives of his time. For this he was attacked by his political enemies as a ‘maniacal innovator’ and criticized as a dangerous radical. Busy man that he was, Jefferson found time to carry on correspondence with Jenner and other medical leaders of his time and to preach the doctrine of immunization. When a delegation of Indians called on him, Jefferson not only had them vaccinated, but entrusted to their leader, Chief Little Turtle of the Miamis, a supply of vaccine for the members of his tribe. Shipments of virus came to him and he distributed them far and wide.”

Dean of American Medicine Dies.—William H. Welch, M. D., “Dean of American Medicine,” died on April 30 at the age of eighty-four.

Doctor Welch was graduated from Yale University in 1870 with the degree of A. B. and from the College of Physicians and Surgeons in 1875 with the degree of M. D. Becoming interested in pathology he took postgraduate courses in this subject in Germany, where he received also his early training and inspiration in bacteriology.

On his return to this country in 1878 Doctor Welch established a primitive pathological laboratory at Bellevue Hospital Medical College, where he was professor of pathological anatomy and general pathology until 1884. He was only thirty-four years of age when he became head of the pathological department of Johns Hopkins University, an office he held for more than thirty years. In the selection of Doctors Osler, Halstead, and Kelly he laid the foundations of the university medical faculty of which he was dean from 1893 to 1898. In 1916 he organized and became director of the Johns Hopkins School of Hygiene and Public Health and at the age of seventy-five he founded the School of the History of Medicine, where he lectured and taught for many years.

As president, and later as a member of the Maryland State Board of Health, Doctor Welch forged “new lines of activity in the days when official administration in that field was both halting and limited.”

For many years, Doctor Welch was associated with the Rockefeller Institute for Medical Research as president of the board of directors. He was also a member of the International Health Board and of the China Medical Board of the Rockefeller Foundation.

Recognized internationally as a leader in medicine, Doctor Welch was honored by the entire medical world on April 8, 1930, in a celebration of his eightieth birthday. Over a coast to coast network, President Hoover delivered a radio address from Memorial Hall in Washington in which he referred to Doctor Welch as “Our greatest statesman in the field of public health.” At the same time, equally warm tribute was paid him in the presence of audiences assembled in many parts of the world from New York to San Francisco, and from Paris to Peiping.

Trachoma.—Reports from the United States Public Health Service which have just reached us indicate a downward trend in the prevalence of trachoma in this country. The disease is reportable here, and for many years the United States has refused admission to immigrants showing symptoms of it. In the United States, trachoma is found mostly in the Ozark and Appalachian Mountain regions and among the Indian tribes of the southwest; poverty and insanitary living conditions are important factors in its contraction and spread.

University of California Experiments Show Bile Needed to Help Vitamins.—As a further step toward an adequate understanding of the complex chemistry of the body, two University of California scientists have just completed a series of experiments showing that vitamin D, valuable as it is to the body, cannot be absorbed through the digestive tract unless the gall-bladder is in good working order, and is supplying an adequate amount of bile.

The men who made this experiment are: Joseph D. Greaves, research associate, and Dr. Carl L. A. Schmidt, professor of biochemistry on the Berkeley campus of the University.

In making their experiment, Greaves and Schmidt made use of 450 rats. All of these rats had the common disease, rickets, resulting from an inadequate amount of vitamin D. Some of them, in addition, had jaundice, which appears when the bile is backed up in the gall-bladder through obstruction of the duct leading to the intestinal tract.

With these rats as subjects, the University men instituted a course of treatment with vitamin D in the form of viosterol, in an effort to cure the rats of rickets. They found that the vitamin D worked as expected on rats with normal bile ducts, but on those with jaundice the vitamin had no effect. From this they conclude that rickets, in rats at least, cannot be cured with vitamin D unless the bile system is functioning normally. They suspect that the stoppage of the bile and consequent jaundice leads to an injury or functional impairment of the growth cells in the bones.

Doctors Send Sick to University of California from Many Counties in State.—During the past two years the University of California's offer to consult with practicing physicians and to aid in the diagnosis of treatment of obscure diseases has been accepted by 1,925 doctors in forty-six counties of the state, according to a report just issued by Dr. Langley Porter, dean of the Medical School.

Through the coöperative service 4,085 residents of California have been aided in recovering from or in controlling to some extent the peculiar or stubborn diseases with which they were afflicted.

The list of counties which the University has served in this manner covers the state from Imperial on the south to Del Norte on the north. The number of doctors using this service and the number of patients which they referred to the State Medical School staff are as follows:

Alameda, 44 doctors, 52 patients; Butte, 35 and 89; Calaveras, 5 and 9; Colusa, 6 and 14; Contra Costa, 87 and 259; Del Norte, 3 and 7; El Dorado, 2 and 5; Fresno, 71 and 106; Glenn, 12 and 42; Humboldt, 18 and 61; Imperial, 2 and 8; Inyo, 1 and 1; Kern, 12 and 13; Kings, 4 and 8; Lake, 4 and 13; Lassen, 4 and 13; Los Angeles, 14 and 14; Madera, 6 and 16; Marin, 20 and 41; Mendocino, 17 and 67; Merced, 21 and 59; Modoc, 12 and 29; Mono, 8 and 8; Monterey, 48 and 105; Placer, 18 and 35; Plumas, 3 and 4; Sacramento, 52 and 71; San Benito, 6 and 16; San Francisco, 808 and 1,374; San Joaquin, 76 and 165; San Luis Obispo, 7 and 14; San Mateo, 39 and 106; Santa Clara, 132 and 272; Santa Cruz, 26 and 81; Shasta, 10 and 32; Siskiyou, 16 and 50; Solano, 49 and 118; Sonoma, 100 and 349; Stanislaus, 67 and 204; Sutter, 5 and 5; Tehama, 6 and 23; Trinity, 3 and 3; Tuolumne, 6 and 23; Tulare, 22 and 58; Yolo, 9 and 21; and Yuba, 9 and 22.

Congenital Malformations.—The Gynecean Hospital Institute of Gynecologic Research of the University of Pennsylvania is conducting an intensive study of families into which congenitally malformed individuals have been born.

Special interest centers in families in which malformations have appeared in two or more children. Physicians who have knowledge of any such families are urged to communicate with Dr. Douglas P. Murphy, Gynecean Hospital Institute, University of Pennsylvania, Philadelphia.

Appointment Honor to Dr. Robert T. Legge.—Word has been received that Dr. Robert T. Legge, professor of hygiene at the University of California at Berkeley, has been invited to become a member of the American Committee, representing the United States in the Section on Industrial Diseases, at the Seventh International Congress on Industrial Accidents and Occupational Diseases, to be held in Brussels, Belgium, July, 1935.

The other members of the American Committee are: Dr. Emery R. Hayhurst of Ohio State University, President Dr. Alice Hamilton of Harvard University, Professor Yandell Henderson of Yale University, and Dr. R. R. Sayres, United States Bureau of Mines.

"Health": A New California Publication.—A journal entitled *Health*, edited by Dr. Percy T. Magan, president of the College of Medical Evangelists, Los Angeles, and published by the Pacific Press Association, Mountain View, California, is now one of California's monthly publications, and three numbers have already come off the press. The sponsor of the enterprise is that small but exceedingly active religious denomination, the Seventh-Day Adventist Church, whose members, from the beginnings of their work in 1844, have been ardent advocates of all rational measures looking toward the building up of the health of the nation. They possess a most cohesive and earnest world-wide organization for the distribution of religious and health literature, and already have a large subscription list for their latest venture. At Los Angeles the College of Medical Evangelists, a Class A school, has made for itself an enviable standing.

The first editorial is entitled "Health's Confession of Faith." It should be of interest to physicians and surgeons, for the reason that it brings to light the idea that at the present time there are only two Protestant churches holding to definite doctrines of health and healing as fundamental tenets of their religious faith. These two are the Christian Scientists and the Seventh-Day Adventists. Both of these groups firmly believe that to them has been given a divine world-wide mission to teach a definite gospel of health and healing.

So far as the fundamental teachings of the two denominations in this regard are concerned, they are as opposite to each other as the poles; those of the Church of Christ Scientists being not in accord with the vital beliefs of scientific medicine as taught and practiced by the great bulk of physicians composing the medical profession today.

On the other hand, the case with the Seventh-Day Adventists is far otherwise. Doctor Magan sets forth that the medical ministry of this group has for its foundation-stones the teaching of the Great Book and the teaching of all true medical science. To members of the Seventh-Day Adventists Church there can be no possible conflict between true science and the teaching of scripture, for, as they view it, the Creator of all things is the author of both.

Because of the scientific aspect of the medical faith of the band of men and women who have conceived and are bringing forth this new publication, *Health*, there is a natural and powerful bond of union between the profession of scientific medicine and the Seventh-Day Adventist Church.

The editor and publishers of *Health* have stated they would do all within their power in upholding the ideals of the medical profession and in supporting the medical profession in all of its contentions against commercialization of the healing art.

Fifth Congress of Pan-American Medical Association.—The recent meeting of the Pan-American Medical Association was held in the nature of a floating congress, comprising a cruise to the West Indies and South America. On March 14, 514 medical men, their families and friends, sailed from New York on the steamship *Pennsylvania* for a sixteen-day cruise of the Caribbean Sea. This unique medical convention was held on the high seas and also on shore jointly with the physicians of the ports of call, namely, Havana, Cuba; Panama; Cartagena, Colombia; Maracaibo, La Guaira and Caracas, Venezuela; and San Juan, Puerto Rico. In all countries visited, the program included visits to the hospitals, institutions of learning and points of interest. In the Latin-American countries, receptions were tendered by the local doctors, governmental officials, and many individual and official courtesies and hospitalities were extended to all members and delegates. Veritably, the congress was a cross-section of the progress of medicine, and the 193 papers presented before its scientific sections well represented the latest discoveries and methods of treatment in every branch of medicine.

To stimulate interest, closely allied special sections were combined into four large groups. This combination of specialties resulted in very well attended and interesting meetings. A daily meeting of the general assembly also was held before which papers on topics of general interest were read. In addition, a number of round-table discussions, some twenty-five moving pictures demonstrating operations and addresses on modern aspects of bringing up children were given.

"Vitamin D Milk"—San Francisco Executive Order. All distributors of milk in San Francisco are hereby notified that the sale or distribution of "Vitamin D Milk" within the city and county of San Francisco is prohibited, except that a permit for the sale and distribution may be granted only if the following requirements are fully complied with:

1. Milk reinforced or fortified with vitamin D shall be the produce of non-reacting tuberculin-tested dairy herds housed on dairy farms complying with the provisions of the milk ordinance (effective May 15, 1933) and the rules and regulations of the Department of Public Health governing the production of Grade A market milk.

2. It shall be plainly indicated on the label of each package of vitamin D milk (a) the method of introduction of the added vitamin D; (b) the number of vitamin D units the reinforced product contains; (c) evidence of approved laboratory confirmation at the expense of the distributor; (d) definite instructions that vitamin D milk is to be used only on the advice of and under the supervision of a physician.

3. No therapeutic claims of any description shall appear on the label or in any advertising copy.

The Director of Public Health wishes to record the fact that he disapproves the present tendency of manufacturers to add measured quantities of vitamins to foods for commercial purposes. The insufficient and incomplete scientific knowledge available at this time on the possible effects of the consumption of vitamin reinforced food products over indefinite periods of time fully justifies the attitude that caution should be observed in the use of such products. There is still considerable question, particularly in the instance of vitamin D, of what constitutes the proper dosage of vitamin concentrates in the various age groups. Any attempt to increase the sale of a food product, especially milk, by the addition of a substance whose value to the public health is still a controversial problem is indeed ill advised, since the final evidence, to be determined by research methods, has not yet been secured. Even if it is granted that the actual danger in the consumption of vitamin D milk is relatively minimal, there is as yet no definite and accepted information on the limits or margins of clinical safety. Under these circumstances, therefore, it is believed that the administration of such products should be surely in the province of the physician and not in that of the commercial distributor or manufacturer of food products. (Signed) J. C. Geiger, Director of Public Health.

Enlarged Federal Program for Spray Residue Study. The United States Department of Agriculture will broaden its search for substitutes for lead arsenate and other poisonous spray materials now in general use to protect fruit and vegetables from insects, Secretary Wallace announced today.

Many sprays, especially the arsenicals, leave a residue which presents a definite health hazard, and it is necessary for the department to enforce strict regulations on spray removal to protect consumers. The department seeks to develop harmless insecticides to replace the more harmful ones and thus do away with the necessity for spray removal, which is troublesome and expensive to fruit growers.

Three bureaus—the Bureau of Entomology, the Bureau of Chemistry and Soils, and the Bureau of Plant Industry—will participate in the enlarged program.

Seminar in Physical Therapy.—A seminar will be held at the Mayfair Hotel, Seventh Street at Hartford, Los Angeles, on Thursday, June 21. Sessions will run from 9 a. m. to 12 noon, and 2 to 5 p. m. The dinner session will be 7 to 10 p. m.

The Western Division of the American Congress of Physical Therapy, in joint session with the Pacific Physical Therapy Association, and with endorsement of the Los Angeles County Medical Association, will have as guest speakers: Disraeli Kobak, M. D., professor of physical therapy at Rush Medical College, who will speak on the latest developments in application of fever therapy; and Bernard L. Wyatt, M. D., of the Wyatt Clinic, Tucson, Arizona, who will talk on "The Newer Aspects in Treatment of Chronic Arthritis."

Registration fee is \$3, which includes banquet ticket. Any money collected above actual expenses will be donated to the Barlow Medical Library for books and literature on physical therapy. For further information write to John S. Hibben, M. D., 506 First Trust Building, Pasadena.

CORRESPONDENCE

Subject of following letter: Wastage or loss of narcotics in topical applications, in ear, nose and throat practice.

To the Editor:—Recently a physician practicing eye, ear, nose and throat work was convicted on a technical narcotic charge and sentenced to serve fifteen months at McNeil Island. It was claimed that he used fictitious addresses, but there was an undercurrent of suspicion against him of either using narcotics himself or selling them. I had been associated with him for about six months and was almost certain that he was not an addict and was not selling narcotics.

I became interested in the case and consulted Dr. Charles S. Schroeder, of the Research Laboratory connected with the San Diego Zoölogical Society in Balboa Park. He referred me to Mr. James T. Jennings, who is an expert in extracting narcotics and other drugs, and is employed by the city in investigations of poison cases, etc. The enclosed report is self-explanatory. The only addition I can make is that narcotics used by eye, ear, nose and throat specialists for local anesthetics left in the nostril for ten minutes have a loss of 90 per cent or more; applicators thrown away after being used for fifteen minutes have a waste of 80 to 85 per cent; and, after twenty minutes there is a loss of 75 per cent and over.

As there has been no work done on this loss of narcotics in ear, nose and throat work, there was no way to refute the United States attorney's questions as to "what becomes of all the cocain," "where does it go?" Hundreds of pounds are being thrown away by specialists, and should they be called by the Narcotic Bureau to check up on what they are using it for they would be in about the same situation as the above stated case.

I think that this should be checked into and a thorough investigation be made; also, that men practicing

eye, ear, nose and throat specialties should be notified regarding the situation, preparatory to a possible check-up by the Narcotic Division.

Very truly yours,
ARTHUR WEGEFORTH, M. D.

April 23, 1934.

To Dr. Arthur Wegeforth,
Granger Building, San Diego, Calif.

Dear Sir:—Report on recovery of cocain from cotton swabs follows:

Purpose of Experiment: To soak up a known amount of 10 per cent cocain hydrochlorid solution with two cotton swabs, to apply them to the nasal passage as is commonly done for a local anesthetic, and then to extract the narcotic left unabsorbed in order to determine just how much of the cocain "used" is actually absorbed by the mucous membranes, and just what amount is discarded in the waste.

Procedure: (1) At the Zoölogical Research Hospital, San Diego, California, April 9, 1934, was received a small sealed bottle from Allen's Exclusive Pharmacy containing six grains of cocain hydrochlorid in one dram of distilled water (a 10 per cent solution). The solution was absorbed in two cotton swabs weighing approximately five grams each, which were then applied to the nasal passage of the subject, Dr. A. Wegeforth, one swab for a period of ten minutes, the other swab for a period of twenty minutes. Then the swabs and the small bottle were washed repeatedly with small portions of absolute alcohol to extract all of the cocain hydrochlorid, if any, left in the bottle or remaining in the swabs after anesthesia. The alcoholic solution and mucus thus obtained were then evaporated to dryness, redissolved in alcohol and filtered to remove the mucus, and again evaporated and dried. The residue of cocain hydrochlorid was then weighed and bottled.

(2) To check the results of the first analysis a second similar experiment was made. A small sealed bottle was received from Allen's Exclusive Pharmacy April 16, 1934, at Doctor Wegeforth's office, containing six grains of cocain hydrochlorid in one dram of distilled water (a 10 per cent solution). The contents of the bottle were soaked up in two cotton swabs weighing approximately five grams each, which were then applied to the nasal passage of the subject, Dr. A. Wegeforth, this time for twenty minutes each. Then the cocain hydrochlorid remaining was extracted from the cotton swabs and from the bottle, employing the same procedure as before.

Results: (1) In the first trial, 289 milligrams or 74.3 per cent of the original six grains of cocain hydrochlorid was recovered.

(2) In the second trial 279 milligrams or 71.8 per cent of the original six grains of cocain hydrochlorid was recovered. (Percentage lower, perhaps, because one swab was left in the nostril for a longer period.)

Conclusion: The conclusion to be drawn from the experiment as conducted above is that cocain hydrochlorid, when used as a local anesthetic and applied by means of cotton swabs left in the nasal passage for a short time, is in large measure wasted. The experiment indicates that 70 to 75 per cent of the narcotic is thrown away in the waste cotton, or in part in the bottle the solution is delivered in. (Results obtained were probably lower, if any, than the true value, due to possible loss in the recovery process.) That is, approximately only 25 per cent of the cocain hydrochlorid is actually used in anesthetizing. Perhaps the concomitant loss is at least in part necessary, but it is nevertheless a factor to be considered, in view of the above experiment.

JAMES T. JENNINGS, A. B.

April 21, 1934.

Subject of following letter: Medical international good-will tour to Japan and the Orient:

May 18, 1934.

To the Editor:—As you have read in the enclosed invitation and pamphlet, it gives me the greatest pleasure to make this announcement of the doctors'

first international good-will tour to Japan, being sponsored by the International Medical Club of Southern California, Japanese Medical Society of Southern California, and American Medical Alumni Society of Japan, in Tokyo. . . .

On this tour to Japan we would like very much to invite all the members of the California State Medical Association and their families. Due to the limited finance at the present time, it seems rather difficult to send out separate invitations to each individual member; therefore, we wish to ask your much-needed support. Will you kindly announce this invitation, together with the necessary information in your monthly CALIFORNIA AND WESTERN MEDICINE magazine? Through your journal we can be positive that every member will be informed. It will help us immensely if you will please do this favor for us. . . .

Sincerely yours,
ISAMI SEKIYAMA, M. D.

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"We wish to announce an unusual and beautiful trip to Japan and the Orient. This is the first trip of this nature, and the opportunity is extended to you for a glorious summer vacation to be spent joyously and educationally together in the spirit of international good will.

"This trip is being arranged through the courtesy and coöperation of the Japan Tourist Bureau and the N. Y. K. Steamship Line Company (subsidiaries of the Japanese Government). The tour is sponsored by the International Medical Society and the Japanese Medical Society of Southern California and the American Medical Alumni Society in Japan, represented by Dr. T. Kibata, residing in Tokyo. Arrangements have been made for the best of accommodations and entertainment at the lowest expense. The famous medical colleges and institutions of Japan will be visited, and the most noted medical men and professors of Japan will welcome you.

"We take great pleasure in inviting you and your family to join with us on this tour, and fulfilling your long-sought desire of seeing beautiful Japan and the fascinating Orient. Leave Los Angeles July 16 and return September 8. For information, please write to Doctors' First International Good-Will Tour, in care of Dr. I. Sekiyama, 117 North San Pedro Street, Los Angeles."

Subject of following letter: A copy of a report submitted to the California State Board of Health at its meeting on May 19, 1934.*

Dr. J. D. Dunshee,
Director, State Department of Public Health,
San Francisco, California.

I respectfully submit the following comment on the plague situation:

The epizootic of plague in Tulare and Kern counties is continuing, but the results of the laboratory examination of squirrels sent in by Mr. Ross suggest that it may be on the wane for the present season. . . . The previous record of squirrel plague in California shows that June, July, and August are the high months.

We have not dealt with as extensive an outbreak of squirrel plague since the peak of the epizootic in Contra Costa and Alameda counties in the period between 1907 and 1919. In the last three months of that period forty-six positive squirrels were found in Contra Costa and twenty-eight in Alameda County, while the total for the period was 431 for Alameda County and 1,698 for Contra Costa. Other sharp outbreaks have probably occurred that burned themselves out without our having had the condition brought to our attention in time to prove the nature of the epizootic. San Luis Obispo County had such an experience a few years ago.

Since the first appearance of plague in San Francisco in 1900, we have had two bubonic epidemics,

* See other articles printed in this issue of CALIFORNIA AND WESTERN MEDICINE on the subject of plague, as follows: page 407 and page 425.

the first in San Francisco, resulting in 113 deaths and the second in San Francisco and Oakland, with seventy-eight deaths. We have had two pneumonic epidemics, the first in Oakland, with thirteen deaths, and the second in Los Angeles, with thirty deaths. We have had in all thirty-five sporadic cases of plague, with nineteen deaths, in rural districts the following counties being represented: Alameda, Contra Costa, Monterey, San Benito, Santa Clara, Santa Cruz, Santa Barbara, San Joaquin, and Los Angeles. Squirrel plague has been proved in Alameda, Contra Costa, Fresno, Merced, Monterey, San Benito, San Joaquin, Santa Clara, San Luis Obispo, Santa Cruz, Stanislaus, San Mateo, Santa Barbara, Ventura, Kern, and Tulare.

The pathological findings among the squirrels in Tulare and Kern counties at the present time shows that the prevailing strain is of a high degree of virulence, and lends support to the belief that the disease is likely to spread to other new territory or return to previously visited localities. Especially disturbing is the evidence of increased organ virulence of pulmonary type. Squirrels have been seen with a typical acute pneumonia and a profound septicemia, which are the characteristics of the most dreaded form of human infections.

The situation is, in my opinion, sufficiently serious to justify a strong effort to arouse the interest of county boards of supervisors in the expenditure of money for squirrel eradication and to warrant the insistence upon the recognition of this as a public health emergency and not one of agricultural interest. Eradicative measures should be in the hands of health authorities exclusively in known plague-infected areas, and the work should be carried forward to the point of practical extermination of the squirrel population in as large a territory as possible surrounding known foci.

Respectfully submitted,
W. H. KELLOGG, M. D.,
Chief, Bureau of Laboratories.

LOS ANGELES COUNTY HOSPITAL*

In the special article section of this issue (pages 402 and 406) and in the editorial department (page 427) are printed articles and comments on the Los Angeles County Hospital, incident to the dedication of the recently completed new "Acute Unit." Because all county hospitals are of interest to California physicians, additional information concerning this massive \$13,000,000 building is given below.

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From the Los Angeles *Examiner*, April 16, 1934.

Los Angeles Dedicates Massive New \$13,000,000 County Hospital for Poor

GIANT REFUGE PROVIDES FOR 2400 PATIENTS

Massive refuge of the sick poor, Los Angeles County's new \$13,000,000 hospital, yesterday was given to its owners, the people.

The formal dedication services were read in the ground floor auditorium, a relatively tiny cell in the majestic 200,000-ton structure of reinforced concrete.

Above, tier on tier for twenty stories, the first of the suffering hordes to seek its sanctuary listened to the solemn ceremony through a loudspeaker system.

For although the formal exercises were held only yesterday, the hospital has housed patients since last

* References to other articles on the Los Angeles County Hospital which have been printed in CALIFORNIA AND WESTERN MEDICINE are as follows:

Vol. XXXII, No. 2, February, 1930, page 117—Editorial.
Vol. XXXII, No. 3, March, 1930, page 193—Editorial.
Vol. XXXIV, No. 5, May, 1931, page 376—Editorial.
Vol. XXXIV, No. 6, June, 1931, page 420—Editorial.
Vol. XXXV, No. 2, August, 1931, page 133—Editorial.
Vol. XXXVII, No. 1, July, 1932, page 69—Miscellany, News.
Vol. XL, No. 1, January, 1934, page 58—Editorial.
Vol. XL, No. 1, January, 1934, page 70—Miscellany, News.

Christmas Day, and now is operating at nearly the normal capacity of 2400 patients.

SIXTY-TWO HUNDRED AT SERVICES

County Supervisor Gordon L. McDonough presided, opening the exercises with a brief greeting to the 1200 persons who jammed the auditorium, and 5000 others who overflowed into crowded corridors, listening through the loudspeaker system as they toured the hospital.

He was followed by three high church dignitaries, who quoted from the scriptures and reminded the audience of the deep religious significance of hospitals. . . .

PRaises BUILDERS

Sounding another note, Mayor Frank L. Shaw rose warmly to the defense of the builders and the political body which supervised the construction of the hospital.

"This magnificent institution," he said, "has been made the target of unfair and misleading propaganda for political ends. Thanks to those in charge it was built at a cost per unit of construction that rivals any similar institution. It was paid for out of current revenue with the exception of \$3,500,000 obtained through sale of bonds."

The dedicatory address was made by Dr. Percy T. Magan, president of the College of Medical Evangelists, who, with hand upraised and pointing to the towering edifice above him, put to the audience the age-old question asked by Joshua:

"What mean ye by these stones?" . . .

He was followed by Dr. John V. Barrow, chairman of the medical advisory board, who declared:

"This guarantee of an enduring civilization has as its purpose to prevent the deserving sick poor from wandering in the streets."

He said that it was built for all races and all creeds and that there are now fifty-two different nationalities represented in its wards.

POLITICAL DANGERS

Earl E. Jensen, superintendent of the County Department of Charities, referred to the political dangers which threaten great public institutions.

"May this hospital never be tainted with political, personal or other selfishness tending to destroy its purpose in the community," he said.

The concluding dedicatory remarks were made by Supervisor Hugh Thatcher, who represented Chairman John R. Quinn of the Board of Supervisors, unable to attend. . . .

From the Los Angeles *Times*, April 15, 1934.

New General Hospital Will Be Formally Opened to Public Today

GREAT COUNTY STRUCTURE READY FOR DEDICATION

Thirteen-Million-Dollar Building Largest of Kind and Declared Nation's Best Equipped

By CHAPIN HALL

The indigent sick of Los Angeles County are cared for in a palatial building which cost the taxpayers \$13,000,000. In the minds of many of the contributing owners the structure carries an aroma of something besides ether, carbolic, and surgical dressings.

The General Hospital and the San Gabriel dam, which was never built, are given frequent rating as expensive luxuries for the taxpayers of the county, but at least in the completed hospital there is something by way of offset to the expenditure.

It is the largest single unit hospital and is said to be the most perfectly equipped in the United States. Probably in the world. A distinguished Australian investigator on a 'round-the-world inspection trip for the purpose of acquiring ideas and data for a government institution in his country told Superintendent Martin that had he visited Los Angeles first the rest of his trip would have been unnecessary.

ARRAY OF COMPLAINTS

Yet in the face of all this magnificence, letters and complaints from divers sources find their way to *The Times* denouncing this or that in connection with the plant and its operation. These range all the way from assertions of downright theft of public funds to petty misunderstandings. . . .

I approached the job of looking into the wheels in an effort to see what makes them go round with a more or less open mind. Which is to say I knew nothing whatever

about the large Los Angeles hospital, but with a normal healthy prejudice against hospitals in general. . . .

JOHN PUBLIC SPOILED

The delver found, in the course of his investigation, that many of the complaints are based on a delusion of grandeur. Uncle Sam and his contemporaries in state, county, and city relief work have, in a manner of speaking, spoiled John Public. The Great White Father at Washington feeds, clothes and educates his children. He paternalistically snatches their tonsils and appendices and reconstructs the human chassis to the asserted financial harm of a long list of medical men and surgeons who have perfected themselves in the art of healing and repair.

From a predepression normal of around 15 per cent this free service has grown until, at times, it seems to the doctors that half of their available customers are being cured, killed or operated at public expense.

GROWTH IN SERVICE

In 1879, the first full year of operation by the newly created county hospital, 238 patients were treated, an average of slightly less than twenty a month. This year an estimate of 60,000 will not be far wrong. An average of 5000 a month or 166 a day. At an average of thirteen hospital days per patient the impressive total of 780,000 hospital days' care is arrived at.

Since the new building was occupied a couple of months ago, an increase of 30 per cent in bed patients is indicated. This is partly due to the fact that a long waiting list (more than 1000) of candidates for elective surgery and treatment is being rapidly reduced by reason of increased facilities.

It is unquestionably true that, because of the late depression and because of the undermined financial condition of thousands of citizens ordinarily able to pay for private medical care, an unusual burden has been laid upon the county. Even individuals earning \$125 or \$150 a month are in no position to purchase a \$500 operation. Through the social service department of the county charities organization a careful investigation of all cases is made and arrangements perfected whereby the patient will reimburse the county over a long period of deferred payments or up to the limit of his capacity to make such reimbursement without becoming a charge upon the county welfare work.

CHECK UP ON LOSSES

Some criticism is directed in this direction. There is delay at times in passing upon an applicant, and there has been considerable loss in failure to collect from those theoretically able to pay. More than one hundred workers now are employed in this department and a system is in process of development which should reduce such losses to a minimum. Investigations cannot be made in a few moments, but based on a recent survey I do not think an emergency case is often held up beyond the danger point. In such instances the rule is to provide the service first and investigate afterward.

There is often excess expectation on the part of the public in appraising institutions financed from the general tax levy. A patient approaches his hospital ordeal in humility, timidity, and with a sense of appreciation for what is about to be done for or to him. In a week he has progressed to a stage of assurance when he takes for granted the service he is receiving. In a fortnight the "gimme" period is arrived at and if he stays three weeks or a month he is apt to prefer charges against doctors and nurses because his requirements may not be met instantaneously at the peremptory tinkle of a bell or because finger bowls and toothpicks are omitted. . . .

FIVE-HOUR SCRUTINY

For five solid hours I tramped through miles and miles of corridors, slipped on the glassy floors; inspected dozens of wards; saw hundreds of patients; talked to floor superintendents, head nurses, ward nurses, student nurses, orderlies, interns, ambulance drivers, and elevator men. I contacted incoming cases and followed the patient through the ordeal of registration and assignment; I saw social service workers, each in a separate compartment, questioning new patients or relatives in order to determine eligibility and ability to pay something for the benefits about to be bestowed. I prowled about the kitchens and almost fell into a soup kettle large enough to take in what the reporters call—to avoid advertising it—"a small car of a well-known make." I saw more food than any reader could believe there is, and I ate quite a lot of it, for which decidedly "square" meal I acknowledge indebtedness to the taxpayers. I saw one of the eight ambulances maintained by the hospital roll up to the receiving entrance with a desperately injured victim of an accident, and I saw a red blanket thrown over the cot. That means an instant abandonment of all red tape. No more questions; no investigation; no routine; no anything except speed and efficiency. The red-blanket patient has the absolute right of way over everything and everybody until all has been done that can be done, and he is either on an operating table or in a comfortable ward—or in the morgue—for about fifteen patients pass over the divide every twenty-four hours. . . .

To attempt an adequate description of this great institution seems as futile to me as efforts to word-paint the Grand Canyon or Boulder Dam. It is bound to simmer down to a group of numerals setting forth an array of statistics which by no means convey the pulsing great human story which unfolds chapter after chapter from hour to hour. . . .

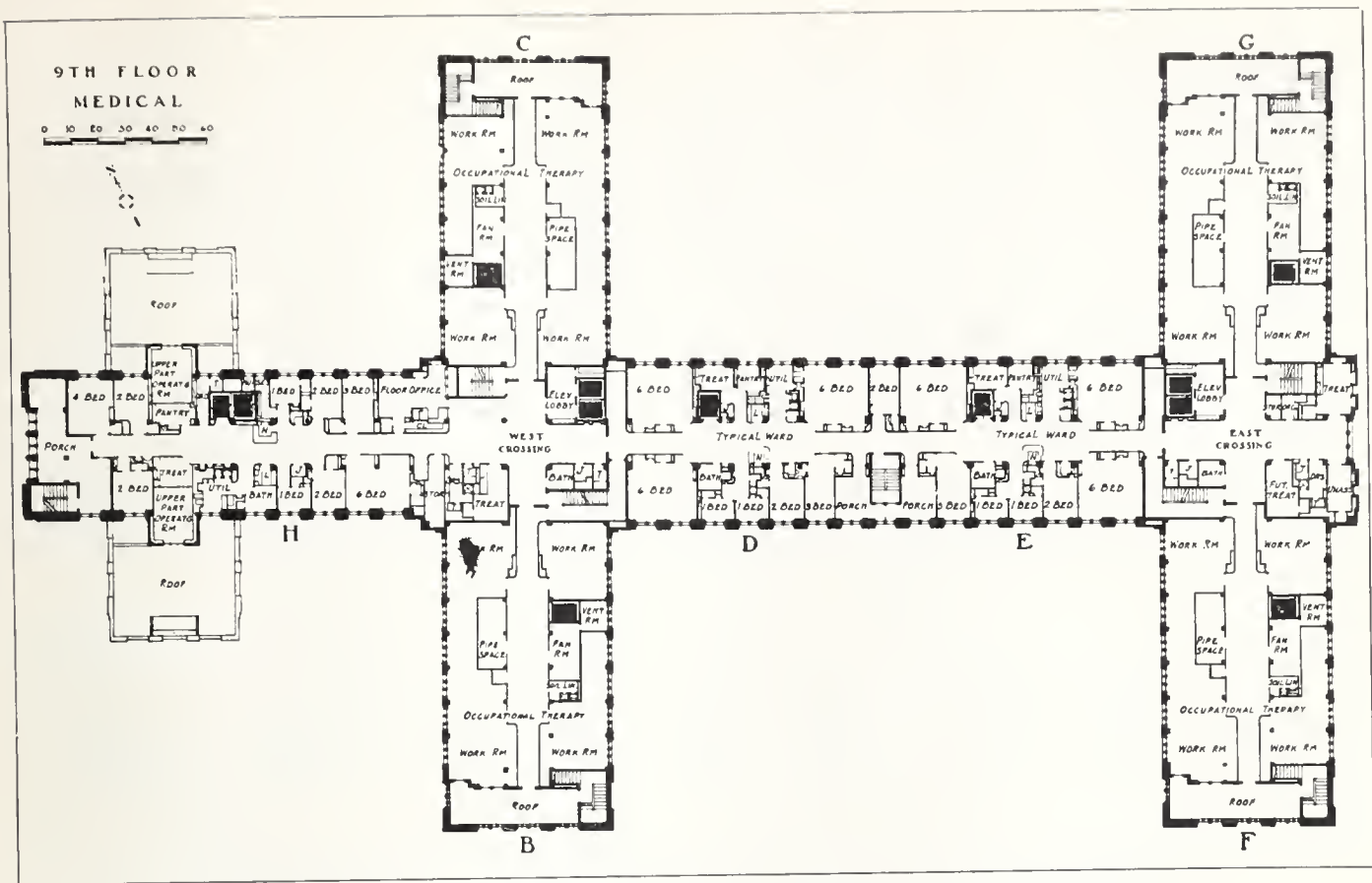


Fig. 3.—Ninth floor ("Medical Floor") in Acute Unit of Los Angeles County Hospital.

AMPLE JUSTIFICATION

I think it is just swell that there isn't a square corner in the entire building; that it took forty-three contractors and 600,000 sacks of cement and 1,000,000 square feet of wire fabric and more concrete than was poured for the Hall of Justice and the City Hall combined to build it. But, after all, little Johnny Green, up in the children's ward, whose right leg has been saved because a great surgeon and a lot of new-fangled equipment were available to him, will soon be able to go back to his corner where he sells enough newspapers and magazines to support a crippled mother—that is the best reason I know of for building and maintaining the world's greatest hospital.

There are 4850 doors in the building, and I'll bet I didn't miss more than twenty-seven of them. It took twenty-six acres of linoleum to go around, which does not include five acres of roof space and a couple of hundred miles of so of corridors. There are 108 miles of electric conduit in the building, 720 miles of wire, 250 miles of piping and it takes 38,000 keys to operate all the locks, and even this doesn't include those for movable equipment, or 9080 post-office box keys. Eight thousand sheets, 4400 slips, 6000 towels, and 4100 blankets are used every day, and the laundry is the second largest in Los Angeles. It takes 633 telephones with thirteen operators to keep contact; 247 electric clocks noiselessly speed the hours, and fifteen tons of ice are the daily output of the refrigeration plant. About sixty operations are performed every day in fourteen perfectly equipped operating rooms, and nine others remain to be put into commission as needed. There are eighty-seven resident physicians, not including internes, and 550 visiting doctors.

PRACTICALLY PAID FOR

The hospital was six years in building and it is practically all paid for, a small bond issue covering preliminary expenses and for additional land being all that is outstanding. Its total cost to April 1 was \$12,892,638.38 with \$65,000 remaining in the treasury to meet delayed accounts. By July 1 it is expected that the construction books can be balanced.

It would take a diligent and able-bodied visitor three eight-hour days to include every part of the plant in his itinerary, but it is this observer's well-considered opinion after one day that Los Angeles County has every reason to be mighty proud of her hospital plant and of the manner in which it is being administered by Superintendent Martin. The cost per patient now is less than \$4 a day and is likely to go to \$3.75 in the near future. . .

OPINION OF EXPERTS

As to construction costs, I have been informed by competent architects that the county obtained a great bargain. In Cook County, Illinois, a hospital plant about one-half the size of the Los Angeles institution recently was built at a cost of \$30,000,000. The staff of the local plant is at present undermanned. Comparatively few additions have been made to meet the greatly enlarged scope of work. The NRA operated to cut down hours and in some

measure efficiency by requiring the superintendent to utilize the helpers assigned instead of those selected because of personal fitness and adaptability on specialized work. Fifteen hundred nurses are on duty, but the afternoon visiting hour had to be abandoned because of insufficient help.

The food, about which complaint sometimes is made, probably is much better than that to which nine-tenths of the patients are accustomed. It is prepared under ideal conditions of sanitation and equipment. It looks nourishing, and it is nourishing. Soups, for example, are made not from bones, but from Grade A shanks—1500 pounds a week.

There are so many "biggest" things in Southern California that the term becomes trite. Some day I may be assigned to "look into a gopher hole." Perhaps a description of such a retreat could be made without recourse to superlatives or a search for comparisons.

LARGEST KITCHEN OF KIND

Not so the General Hospital or the kitchen thereof, the latter being the largest institutional kitchen in the world according to available statistics. It is 260 by 120 feet. At present 10,500 complete meals are served from it every day, while its capacity is intended to take in about 6000 meals more than this, and I never saw so much cleanness under one roof. The finish is white tile and concrete, and the ventilating system carries away the smells before one has a chance to enjoy them.

The foods served include per day:

One ton of meat. In the course of a week 40 lambs, 15 steers, 1000 pounds of bacon and 1000 pounds of ham are consumed. Not bad for a group of sick folks.

Six hundred gallons of milk, 600 loaves of bread, 200 pounds of butter, 300 dozen eggs, 300 quarts of orange juice, 50 quarts of tomato juice, 200 gallons of soup.

When chicken is served, which is about twice a month, it takes 2500 pounds, equal to a flock of 700 fowl.

The stock kettles are of 150-gallon capacity and the soup kettles of 100 gallons each. There are two ovens, one fourteen feet in depth and one seven feet. The hood over the ranges and steam kettles is more than 200 feet long. Coffee and cocoa urns and ice-cream mixers come in assorted sizes up to eighty quarts.

FOOD TRANSPORTATION

Food is transported from the kitchen to the bedside in eighty-four especially designed carts, every inch of space being utilized for a special purpose. About fifteen minutes before mealtime these carts are manned by a crew working with mechanical precision. The carts are wheeled from their assigned space in military order past the bread, milk, soup, vegetable, meat and dessert counters, and sent direct to the wards, where the maids serve the patients, all within fifteen minutes from the time the carts leave their stalls in the kitchen.

The culinary department is presided over by a dietitian who has four trained assistants, all making studies of the

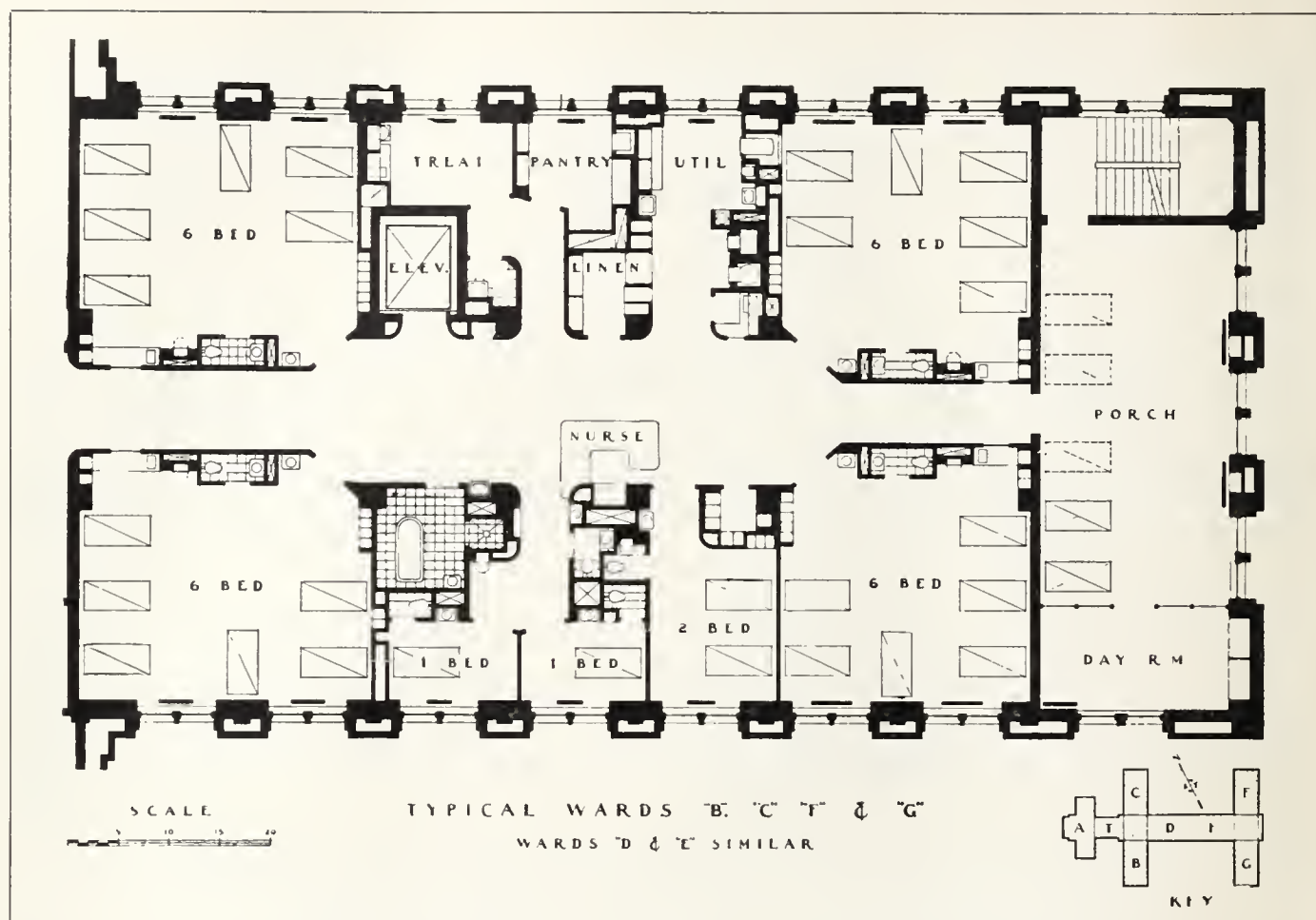


Fig. 4.—Typical ward in the Acute Unit of the Los Angeles County Hospital.

diets prescribed. They capture the calories ordered; prepare formulas for the babies and have jurisdiction over the food served all patients who do not receive the regular hospital diet.

In case of epidemic or emergency the seventeenth floor is so equipped that it can be operated as a separate hospital entirely isolated from the rest of the institution.

There is an auditorium near the nurses' department which all groups in the hospital may use. It seats 750 persons, and church services of all denominations are conducted here from time to time.

PHYSIOTHERAPY SECTION

A particularly interesting department is that devoted to physiotherapy, where about 800 treatments are given per day. Equipment is of the latest type and includes light, ultra-violet ray, massage, corrective exercise, electrical and hydrotherapy. There are thirty treatment booths, five whirlpool baths, two treatment tanks, a 31,000-gallon swimming tank, and a 50 by 37 gymnasium with special equipment. A filtration and chlorinating plant with sufficient capacity to treat the water every six and one-half hours is a feature of this department.

There are twenty-three operating rooms, the main surgery having amphitheater seats for 200 observers. Five different anesthetic gases are piped to each operating table, so carefully guarded that accidents seem most unlikely.

At present there are about 350 children in the section allocated to their treatment. Five teachers, provided by the Board of Education, teach these children according to the regular school curriculum as far as their physical condition permits. Two nurses keep the little patients occupied and entertained, guide their physical hygiene and act as hostesses at their parties. Children convalescing on their sun terrace are provided with sand piles, an aviary, and a monkey cage. So far there are no monkeys.

EVEN BRANCH LIBRARY

A branch of the County Public Library provides an average of 5000 volumes in its general section, primarily for the use of patients, and 2600 volumes for the medical section. For the last year the library circulated 75,000 volumes.

At present the out-patient department is operated in connection with the social service department, maintained in the hospital by the Bureau of County Welfare. During the fiscal year 1932-33 there were 518,377 out-patient visits.

The total expenditures for the last fiscal year, which ended before the new hospital was opened, amounted to \$3,448,098.51. The per capita cost of maintaining an in-patient during the year mentioned was \$3.70, and the out-patient cost 84 cents. For seven months of the 1933-34

fiscal year this was increased to \$3.76 and 89 cents, respectively, due to the additional expense incident to occupying the new building, but representing a decrease from \$5.16 for the fiscal year of 1930-31.

HOSPITAL PLANT EXTENT

The hospital plant, old and new, at the present time occupies fifty-six acres of land upon which there are 122 buildings. The most important of these, aside from the new "acute unit" here under discussion, constitute a psychopathic building erected in 1914; service building in 1918; power plant in 1918; nurses' home and employees' cottages (twenty-six in number), housing approximately 500 members of the nursing staff, at intervals since 1920; communicable disease building, erected in 1924.

Outside of the new building there are 553 beds available in the tuberculosis department; 245 beds in the communicable disease building; 100 in the psychopathic department; sixty in two jail wards and eight in a detached leper ward. . . .

CROWDING IN PROSPECT

It seems probable that from 20 to 30 per cent of General Hospital patients could be released, and a large financial saving made by setting up a workable and expanded out-patient system under which the patient, as soon as practicable, might be sent back to his home or elsewhere to be cared for during convalescence and visited by an authorized physician as often as the exigencies of the case required. The hospital, large as it is, soon will be crowded to an extent where it no longer will be practicable to keep a patient for a month who could be released without detriment, under proper conditions, in half that time.

It is no purpose of this article to apply an ounce of whitewash. There are, doubtless, many things in connection with our care of the indigent sick which need correction. Superintendent Martin will say as much. For one thing, politics should have no part in the operation of such an institution as this. In the main, honestly and efficiently conducted, our whole system of charity health control in Los Angeles County could be subjected profitably to an intelligent survey which would almost certainly result in suggested remedies leading to balanced costs; elimination of features now complained of, a more understanding outlook both from an administrative and public standpoint and better coordination of the problems peculiar to the work. And the greatest of these is coordination. . . .

* * *

FACTS ABOUT THE NEW ACUTE UNIT BUILDING OF THE LOS ANGELES COUNTY HOSPITAL

The building is devoted to the care of acutely ill indigent residents of Los Angeles County. Communicable diseases and psychopathic cases are not treated in this building.

The building is of steel frame, with floors and walls of reinforced concrete. No finish has been applied to the exterior faces of the concrete walls; they remain as left by the forms.

The building contains twenty stories, the largest of which is the main floor, containing 186,200 square feet.

There are 1,408,000 square feet in the building and 16,500,000 cubic feet.

The building contains more than 5000 hollow metal doors, more than 2700 hollow metal cabinets, and 5400 lockers. It has more than thirty-five miles of travertine base. A total of more than 600,000 sacks of cement was used in the 90,000 cubic yards of concrete which the building contains. Electric, plumbing, and heating contracts called for 108 miles of electric conduits, 720 miles of wires and cables, and 250 miles of pipe lines. More than 38,000 keys are ticketed and filed in the key-filing cases.

The building has two independent water supplies from different reservoirs, and four independent electrical services from widely separated plants. It is connected into two separate sewer lines.

The building is earthquake proof. All the damage resulting from the major earthquake of March 10, 1933, was repaired at a cost of less than \$250.

The building contains no ward having more than eight patient beds. The typical nursing unit contains twenty-eight patient beds, divided into four six-bed wards, one two-bed ward, and two one-bed wards. Twelve hundred beds from these wards can be wheeled onto roof areas without elevator transportation.

The building has a normal working capacity of 2444 patient beds and an ultimate capacity of 3600 patient beds. The two topmost floors are reserved for emergency epidemics or disasters.

More than 16,000 meals a day can be served in the building from a central kitchen. Every patient is served at his bed from food carts which are set up in the central kitchen and returned with trays to a central dishwashing plant. One hundred food carts, each capable of carrying thirty-six trays, are garaged and serviced in the central kitchen.

Quantities of some of the other materials used in the building are as follows:

Plastering—620,000 square yards, of which 85,000 square yards is acoustical plaster. Sixty per cent of the wall and ceiling surfaces in the wards were plastered with acoustical (sound-absorbing) plaster. This compares with 15 per cent sound-proofed surfaces in other hospitals.

Structural steel—12,000 tons.

Reinforcing steel—5,000 tons.

Metal lath—285,000 yards.

Wrapping wire of all kinds—70,000 pounds.

Linoleum—80,000 square yards, equal to a strip three feet wide and 45½ miles long.

* * *

ANOTHER COMPILATION OF FACTS AND FIGURES ABOUT THE
ACUTE UNIT OF THE LOS ANGELES COUNTY
GENERAL HOSPITAL

Numbering System

Twenty floors, including basement.

Each floor allotted one thousand numbers.

Each section or wing of floor allotted one hundred numbers.

All similar rooms same number throughout building.

Even numbers to right, odd to left, starting at front or west end of building, also all even-numbered wings to right or south and odd to left or north.

Thus: 8235 indicates eighth floor, 200 wing (south), room 35 (left side, linens).

Following is a list of all floors with a brief reference to the facilities on each. Numbers indicate rooms.

Gate Houses—1200 North State Street via Marengo or Zonal Avenue.

North Building:

Admission and direction of patients.

South Building:

Admission and direction of visitors.

Waiting rooms and terrace for visitors and children.

Basement: (Entrances to basement from Zonal Avenue.)

Mechanical staff and all mechanical equipment.

Receipt and storage, supplies, equipment, 352, etc.

Help's lockers, wash, rest rooms, 142, 150, 347.

Patients' clothing storage, 141.

Ice plant, 468, 470.

Doctors' garage, 2.

Mortuary delivery.

Tunnel to old hospital.

First (Main) Floor

Main entrance and vestibule.

Main lobby and information desk; from here visitors will be directed to south exit and instructed to follow colored floor stripes to proper elevator.

Administration and business offices, 1026, 1048, etc.

Resident medical staff suites, 1042, 1033, etc.

Superintendent of nurses suite, 1045, 1148, etc.

Patients' admitting, examining, registration, classification and distributing center, 1021, 1025, 1050, etc.

Social service, 1129, 1160.

Dining rooms and kitchens, 1601, 1635, 1455, 1677.

Nurses, school; auditorium, classrooms, diet school, laboratories, etc., 1436, 1602, 1645, 1735, 1818.

Physiotherapy Department, 1200 wing, miscellaneous electrotherapy (electrical treatment).

Hydrotherapy and treatment pool (water treatment).

Corrective exercise gymnasium.

Outside courts and terraces.

Second Floor

County branch and general and medical library, 2045.

Laboratories, general, chemical and pathological, 2170 to 2180 and 2336 to 2349.

Mortuary, 2450.

Autopsy rooms, 2453.

Pharmacy, 2135.

Pediatric Department (children), 2600, 2700, 2800 wings.

Out-Patient Department (examination and treatment).

Children's wards, opening on outside terraces and roofs.

Medical record file room, 2020.

Third Floor

Orthopedic Department (bone fracture and corrective surgery).

Out-Patient Department (examination and treatment).

Wards 3200, 3300, 3700, 3800 wings.

X-ray Department, 3500 wing.

Offices and viewing rooms.

Radiographic rooms.

Developing rooms and previewing rooms, 3510, 3511.

Therapy suites (treatment).

Expansion space.

Fourth Floor

Ear, Nose, and Throat Department.

Out-Patient Department, 4100 wing.

Wards, 4200, 4300, 4700, 4800 wings.

Dental Department, 4400 wing.

Electrocardiographic headquarters, 4420.

Genito-Urinary and Rectal Departments, 4600 wing.

Cystoscopy (internal bladder examination), 4600 wing.

X-ray machinery and film storage, 4500 wing.

Fifth Floor

Eye Department.

Out-Patient Department, 5100 wing.

Wards, 5200, 5300, 5400, 5600, 5700, 5800 wings.

Wards for rectal and miscellaneous medical patients.

Sixth and Seventh Floors

General medical floors.

Out-patient departments, 6100, 7100 wings.

Wards, 6200, 6300, 6400, 6600, 6700, 6800, 7200, etc.

Eighth Floor (Maternity Floor)

Out-Patient Department, 8100 wing.

Four birth suites, including patients' preparation and labor rooms, 8003, 8004, etc.

Wards, 8200, 8300, 8400, 8600, 8700, 8800 wings.

Nurseries, 8241, 8331, 8441, etc.

Quarters for resident doctors, 8128, etc.

Ninth Floor

General and minor surgery (for non-infectious cases).

Out-Patient Department, 9100 wing.

Wards, 9200, 9300, 9400, 9600, 9700, 9800 wings.

Interns' quarters, 9000 wing.

Tenth Floor

General and minor surgery (for infectious cases).

Out-Patient Department, 10,100 wing.

Two surgical operating suites, 10,033, 10,042.

Pathological laboratory, 10,015.

Wards, 10,200, 10,300, 10,400 wings, etc.

Eleventh Floor

Wards (for future expansion; not to be furnished or opened at present).

Occupational Therapy Department (not to be furnished or opened at present).

Twelfth Floor

Wards (for future expansion; not to be furnished or opened at present).

Thirteenth and Fourteenth Floors

Wards (for expansion; to be furnished but not opened at present).

Fifteenth Floor (Main Surgical Floor)

Main surgical amphitheater, seating over two hundred spectators, 15,140.

Six surgical operating suites, including associated patients' preparation rooms and doctors' scrub-up rooms, 15,421, 15,428, etc.

Ward for patients recovering from surgical anesthesia, 15,600 wing.

Sixteenth Floor (Museum Floor)

Built-in glass cases for educational display of pathological specimens, 16,400, 16,426, etc.

Locker rooms for visiting doctors, nurses, and medical students, for changing to sterile gowns before going to surgeries on floor fifteen, 16,422, etc.

Private stairs to viewing galleries of surgeries on floor fifteen, 16,432, etc.

Small classrooms for instruction, 16,145, etc.

Sterile supply work and storage rooms, 16,606, 16,607.

Ward for patients recovering from surgical anesthesia (for expansion; to be furnished but not opened at present), 16,600 wing.

Seventeenth Floor (Emergency Isolation)

Wards (to be furnished but not opened at present).

This floor equipped with complete kitchen and other facilities for isolation in case of epidemic or contagious diseases developing among hospital patients.

Eighteenth and Nineteenth Floors

Wards (not to be furnished or opened at present).

TWENTY-FIVE YEARS AGO*

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. VII, No. 12, June 1909

From Some Editorial Notes:

Purely Abuse.—The American Medical Association has stimulated medical organization and medical betterment in every portion of the United States during the last ten years. To say that it has distinctly improved the standard of medical education and medical efficiency, is to put the case mildly. It has built up the foremost medical journal in the world. It has, for the past five years, steadily worked toward the clearing away of a mass of imposition, fraud, dishonesty and trickery that has been foisted upon the medical profession by grasping commercialism. . . .

1 1 1

A New Shame.—And now comes "The Pacific Coast Hospital Association," "A progressive modern enterprise that combines money-making with a great public benefaction." The offices of the institution are in the Union Savings Bank Building, Oakland, and it seems to be presided over and generally managed by one McCullough Graydon. A booklet just received is most illuminating. The scheme, of course, is the same old "dollar a month" medical-treatment-contract business. . . .

1 1 1

Medical Defense.—Last year, at a meeting of the House of Delegates, a committee was appointed to investigate the question of the State Society undertaking the defense of its members in malpractice suits, and to report at the San Jose meeting. . . .

1 1 1

Curious Changes.—It is most singular how, under the operation of either the Federal Pure Food and Drug Law, or the various state pure food and drug laws, the statements in regard to drugs or medicinal preparations will change. . . .

From an article on "Antisepsis and Asepsis in Surgery," by W. W. Beckett, M. D., Los Angeles.

From the wide range of subjects, for a brief address before this society, it seemed to me that I could select none more appropriate than the title of this paper. . . .

From an article on "Amebic Dysentery," by J. D. Long, Past Assistant Surgeon U. S. P. H. and M. H. S.

Heretofore amebic dysentery has been considered almost entirely a disease of tropical countries. . . . In 1907, while on duty at the United States Marine Hospital at San Francisco, the writer found three cases of dysentery which, as far as could be determined from the history of the cases, originated in San Francisco or vicinity; the thought then occurred that probably the disease had secured a foothold here, on account of the large number of persons arriving here each year from countries where the disease is known to be endemic. Before it was possible to study the matter further, other duties intervened and the matter was dropped till last year.

From an article on "Latent Tuberculosis: Its Symptoms, Treatment and Prognosis," by Dr. Max Rothschild, San Francisco.

The attention of the general practitioner ought to be called to a complex of symptoms which is not generally known—the latent tuberculosis. . . .

* This column strives to mirror the work and aims of colleagues who bore the brunt of society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

(Continued in front Advertising Section, page 14)

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA*

By CHARLES B. PINKHAM, M. D.
Secretary-Treasurer

News Items

"Sweeping investigation of the 'health racket' in Los Angeles was ordered today by District Attorney Buron Fitts. Names of more than one hundred persons who have purchased 'insurance' policies for as high as \$45, each assertedly guaranteeing \$25 weekly during unemployment because of illness or injury, but actually fraudulent, are in the hands of Fitts, he revealed. In all, thousands of persons are believed to have been victimized by these smooth-talking salesmen of the bogus concerns." (Press dispatch, dated Los Angeles, May 4, 1934, printed in the San Francisco *Call-Bulletin*, May 4, 1934.)

"Legislation to combat unethical advertising by medicine fakers over the radio was recommended yesterday in a report of the Board of Medical Examiners to Governor James Rolph. The need is clearly shown, according to the report, in the \$100,000 damage suit filed by a Redwood City woman against the manufacturers of a reducing compound. She charges that several months after she started taking a reducing compound, she collapsed in a critical condition. . . . Investigations were conducted by the Board in eighty-seven cases during April, eleven violators were arrested, seven of whom were convicted. Eyesight swindlers using fake radium drops were reported in southern California." (Los Angeles *Illustrated Daily News*, May 7, 1934.)

"Where does artistry end and toe doctoring begin? This highly technical aspect of caring for the human 'dogs' has been settled by U. S. Webb, State Attorney-General, in an official opinion given to the State Board of Medical Examiners. It appears that some of the cosmetologists have been chiropoding, and their activities have been brought to the attention of the state board. The 'cosmos' are the decorative branch of the foot culturists. The 'chirops' are the trouble shooters and repair crew. According to Attorney-General Webb, they must not overlap. A 'cosmo' can clean, trim and tint toenails until the cows come home, but he must not, under any circumstances, remove knots, unwind corns, extract bunions or treat infections. The minute he does he becomes a 'chirop' and must have a state 'chirop' license. 'Chiroping' without the proper license brings state penalties. In the light of the Attorney-General's decision, 'cosmos' will have to watch their step from now on." (San Francisco *Chronicle*, April 28, 1934.)

Of passing interest in connection with the recent exposé of health and hospital associations is an article entitled "Bilking the Public—New Rackets, Frauds, Fake Schemes," printed in the *Police and Peace Officers' Journal*, April, 1934, issue, said article being contributed by the San Francisco Better Business Bureau, wherein the following cases are cited: "A few days ago an old, gray-haired man called at the bureau office and with tears in his eyes told of the death of his wife, whose passing had left him entirely alone in the world. This man explained that his wife had taken out a health association policy many years ago in a local health concern, and had paid them the regular premium ever since. Several months ago she became ill and breathed a sigh of relief when she thought of the policy which would be the means of providing medical aid. Her husband telephoned the company and the association doctor appeared at their home. A cur-

* The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.

(Continued in front Advertising Section, page 17)

Petrolagar's Contribution



Now 5 TYPES

For the convenience of the physician and to suit the requirements and indications in any specialized treatment of constipation or of bowel management, Petrolagar is now prepared in five types.

PETROLAGAR LABORATORIES, INC.
8134 McCormick Blvd., Chicago.

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Send me Free Petrolagar (Check in Squares)

- ☐ Petrolagar-Plain
- ☐ Petrolagar with Phenolphthalein
- ☐ Petrolagar with Milk of Magnesia
- ☐ Petrolagar-Unsweetened
- ☐ Petrolagar with Cascara

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Address _____

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Petrolagar-Plain

 Distinguished by Blue Label. For general treatment of constipation as an adjunct to a rational regimen of habit time, diet and exercise. A palatable emulsion containing 65 per cent (by volume) pure mineral oil.

Petrolagar with Phenolphthalein

 Distinguished by Red Label. For obstinate cases of constipation. Contains two-thirds of a grain of phenolphthalein to the tablespoon.

Petrolagar with Milk of Magnesia

 Distinguished by Green Label. For constipation accompanied by hyperacidity. Slightly more active than Petrolagar-Plain. Contains 8 per cent Milk of Magnesia.

Petrolagar-Unsweetened

 Distinguished by Brown Label. For those who prefer unsweetened Petrolagar or for the patient with diabetic tendencies. Contains no sugar or assimilable carbohydrates.

Petrolagar with Cascara

 Distinguished by Orange Label. Indicated for the promotion of peristalsis and proper fecal consistency. More active than Petrolagar-Plain. Contains 13.2 per cent non-bitter fluidextract cascara sagrada.

FRENCH HOSPITAL**Geary Street and Fifth Avenue
SAN FRANCISCO, CALIFORNIA****RENE A. VAYSSIE, President**
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A general hospital of 225 beds operating an accredited school of nursing, admitting all classes of patients except those suffering from mental diseases. Organized in 1851 and is operated by the French Mutual Benevolent Society, through a Board of Directors, a chief executive officer and staff. Accredited for intern training by the American Medical Association and approved by the American College of Surgeons

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CABOT BROWN, M. D., Consultant in Lung Diseases

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Credentials Thoroughly Investigated

Services Gratis to Employers

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DAY AND NIGHT

California Medical Bureau
(AGENCY)

947 Roosevelt Building
727 W. Seventh Street Los Angeles, Calif.
Phone TRINITY 8001

(Continued from Page 30)

lation of part of the dry wine to produce the alcohol for fortification and, in addition to the above wastes, produce "still slops." The "still slops" are highly concentrated and cause much nuisance. If emptied into streams, fungus-like growths resembling sheep's tails form on the submerged branches of trees and vegetation. Land disposal is used successfully only if soil is deep and loose and the neighborhood is sparsely settled. When these advantages do not exist a serious problem prevails for which no present remedy is seen. On the basis of city sewage, the lees from one ton of grapes are equivalent to the organic waste of thirty-five persons; the "still slops," to 250 persons, according to studies made to date. A winery may handle up to one hundred tons per day. Hence, the problem is apparent.

Nurses Placed Under C. W. S.—Nearly forty public health nurses have been placed in California counties to assist in furthering the C. W. S. nursing project on child health recovery. This is a state project administered by the State Department of Public Health through its Bureau of Child Hygiene, in cooperation with the Children's Bureau of the United States Department of Labor. Its object is to determine the health needs of children in families on relief and in families who are in need, although not on public relief. It must determine, first, the location of undernourished children and, second, must undertake the initiation and development of plans to overcome existing malnutrition, so far as possible, and to prevent its further progress through dietary measures. It must also institute corrective medical procedures wherever they are necessary.

Under the organization of the project, the California White House Conference committees, both state and local, will be used in furthering the project. Qualified public health nurses have been selected to work under district supervisors in the various counties

CANYON SANATORIUM

REDWOOD CITY, CALIFORNIA

An Open Air Sanatorium for
the Treatment of Tuberculosis
and Diseases of the Chest.



NESTLED IN THE FOOTHILLS

For booklet giving full particulars write **RALPH B. SCHEIER, M.D., Medical Director**
San Francisco Office: 516 SUTTER STREET Telephone DOUGLAS 4486

of California. They are employed under the emergency relief program and conflict in no way with the activities of nurses who are already employed in the various official and unofficial units. A uniform technique that has proved to be practical and to comply with the basic principles of public health will be used. The details of the technique are worked out with each nurse by the supervisor, who is guided by the "Manual for Public Health Nursing," state health laws and regulations—national, state, and local relief regulations. Special forms have been prepared which these nurses will use in gathering the data which is required in the project.

California State Health Department Objectives for 1934.*—The ten-year period, 1920-1929, brought to California remarkable improvements in public health administration throughout the state. During this ten-year period, not only were many full-time county health units organized, but outstanding developments occurred in cities and counties which maintained their public health work through the services of part-time officials. Within this decade the tuberculosis death rate for the state dropped one-third. The infant mortality rate dropped 20 per cent. Typhoid fever approached the vanishing point, the mortality rate falling to considerably less than two per one hundred thousand population. Diphtheria, with the assistance provided through the more widespread use of immunization procedures, became greatly reduced in its prevalence and in most communities was placed definitely under control. Outbreaks of the more unusual and spectacular diseases occurred, but they were kept within bounds, and through the activities of local health officers routine procedures in communicable disease pre-

vention and control were carried out with credit to the communities concerned and to the state. This decade—1920-1929—may go into history as a decade of distinct accomplishment in the organization and efficient maintenance of public health departments throughout the whole state.

The records made during this decade have continued since 1929, in spite of the appearance of the worst economic depression in the history of the United States and in spite of reduced budgets for all health departments—city, county, and state. Up to the present year, excellent records in communicable disease control have been maintained. At the last meeting of this organization, attention was drawn to the fact that the general status of public health had been better during the two years preceding than at any time during the ten years preceding. The shadow of reduced appropriations, however, was beginning to fall on many local health departments at that time. It was apparent, last fall, that the provision and maintenance of public health service in all communities would tax the ingenuity of all health officers to provide high standards of service without adequate financial support. However, in spite of unfavorable conditions the records continued to be favorable.

In so far as morbidity and mortality records are concerned, the past year has continued to be exceptional from a public health standpoint. Never in the history of California has typhoid been less prevalent than during the past year. Intensive activities of local health officers in the control of diphtheria have borne fruit, as shown in the morbidity and mortality records for this disease. Aside from outbreaks of food poisoning, psittacosis and plague in a human being, there has been no unusually outstanding occurrence in epidemiology during the past year. Better records were also made last year in maternal and infant mortality. The year 1932 brought a periodically low incidence in measles as well as in other diseases which tend to

(Continued on Next Page)

* By Giles S. Porter, M. D., Director, California Department of Public Health.

* Read before the Health Officers' Section, League of California Municipalities, Santa Cruz, September 18, 1933.



Accurate
Tangent Screen Studies
 UNDER UNIFORM ILLUMINATION

For the first time, standard illumination uniform over an entire one meter screen, is available for careful field study.

The new Bausch & Lomb Tangent Screen is equipped with a special projection device — affording seven-foot candles of illumination for the complete area of the screen.

Write for details of the many different features of this equipment.

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One of the Oldest Banks in California, the Assets of which have never been increased by mergers or consolidations with other Banks.

MEMBER ASSOCIATED SAVINGS BANKS OF SAN FRANCISCO

526 California Street, San Francisco, Cal.

December 30th, 1933

Assets.....\$159,104,590.29
 Capital, Surplus and Reserves.....\$6,650,000.00

The following accounts stand on our Books at \$1.00 each, viz.:

Bank Premises and Equipment - (Present Value \$2,073,413.00)
 Other Real Estate - - - - (Present Value \$635,650.00)
 Pension Fund - - - - - (Present Value \$721,847.18)

MISSION BRANCH.....Mission and 21st Streets
 PARK-PRESIDIO BRANCH.....Clement St. and 7th Ave.
 HAIGHT STREET BRANCH.....Haight and Belvedere Streets
 WEST PORTAL BRANCH.....West Portal Ave. and Ulloa St.

(Continued from Preceding Page)

move in cycles. Similarly, it brought increased prevalence in influenza and other respiratory infections.

It is interesting to note that a slight increase occurred in the number of reported cases of tuberculosis in 1932, in spite of the fact that there were 272 fewer deaths from the disease. It is noteworthy, also, that nearly 3,000 more cases of venereal diseases were reported in 1932 than in 1931. It is believed that the increases in number of reported cases of tuberculosis and venereal diseases indicate the effect of the depression, since most cases of these diseases are reported from clinics where individuals who are unable

to pay for medical service apply for treatment. As a matter of fact, the records show a remarkably clean slate, in spite of the fact that we are in the fourth year of our greatest economic depression.

Actually, the records do not show what is really taking place in lowering the public health standards of our people. There can be no question but that the past four years have produced permanent damage upon thousands of children who will fall victims to many different diseases which shall have had their rise during the present era of hard times. We know that already more individuals are applying for medical relief at tuberculosis clinics. We know that many of the conferences for infants and children are overcrowded greatly because of the mothers' demands that the health of their children be safeguarded. We know that worry and loss of a sense of security have wrought terrific damage in large numbers

of individuals. No one, however, has any clear picture showing the extent of such disaster and no one can prophesy how extensively a program for the control of this damage must be organized to serve during future years.

There can be no doubt of the fact that we have been too optimistic in making appraisals of our morbidity and mortality rates during recent years. There can be no doubt of the fact that many records, in reality, are fallacious. No one has any accurate information relative to the drifts in population that have taken place during the past three or four years. We know that many thousands of Mexicans have returned



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For the care and treatment of Nervous and Mental Diseases, Selected Alcoholic and Drug Addiction Cases

Patients referred to us by attending physicians remain in their care, except under their expressed wish to the contrary. Out of town doctors are furnished with daily reports of patient.

THE PARK SANITARIUM

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San Francisco

California

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to their native land. We know that there has been a trend in the movement of population from urban to rural districts, but actually we have little accurate information upon which to base our morbidity and mortality rates. Besides, we know that migration to this state has continued in spite of the economic depression, if not because of it. We know that the character of this migration is entirely different from that of 1929, although its volume may be even greater.

As a matter of fact, we are somewhat at sea at the present time. With public health budgets reduced and with unknown conditions ahead of us, it is rather difficult to form any definite objectives for the coming year. We must hold fast to standard procedures that have been developed throughout the years, and we must at the same time be prepared to adopt new methods for use in emergencies as they may appear. It would seem, however, that, in addition, we must make special efforts to secure provisions for the prevention and treatment of tuberculosis in the large numbers of individuals who have unquestionably been damaged through malnutrition and worry, if not starvation. It would seem that we must be prepared to do vastly more work in the control of this disease than has been customary in predepression years. We must do vastly more to raise physical standards among children who have been damaged through improper feeding, or through lack of food. The scars of the war are still worn by the children of central Europe who are now young adults, and the scars of this economic depression will as surely be worn by our young adults of the next generation. No child can suffer for lack of food, or malnutrition, without exhibiting physical signs at some later stage, if not immediately.

It would appear that new burdens must be added to the health officer's routine during the years that are immediately to follow. From the standpoint of public health, the depression is not over—it is just beginning; and the conscientious health officer is faced

(Continued on Next Page)



TWIN responsibility FOR THE DOCTOR

It is to her doctor that the mother looks—not only for her own well-being—but that of her child.

During pregnancy her own bones and teeth must be safeguarded; but so also must be the developing bones and teeth of the little newcomer. This is the doctor's twin responsibility.

It is a grave responsibility—and a vitally important one. The mother's diet, during pregnancy and lactation, must be—

Rich in Calcium, Phosphorus and Vitamin D

Therefore, Cocomalt is suggested. For Cocomalt mixed with milk, produces a delicious food-drink not only richer in calcium and phosphorus than milk alone . . . but also containing Vitamin D, under license by the Wisconsin University Alumni Research Foundation. Every cup or glass of Cocomalt, prepared according to the simple label directions, contains not less than 30 Steenbock (81 U.S.P. revised) units of Vitamin D.

Properly prepared, Cocomalt adds 70% more caloric value to milk—increasing the protein content 45%, the carbohydrate content 184%, the mineral content (calcium and phosphorus) 48%. It comes in powder form only, easy to mix with milk. It is sold at grocery and good drug stores in ½-lb., and 1-lb. air-tight cans—also in 5-lb. cans for hospital use at a special price. Equally delicious HOT or COLD.



FREE to Physicians:

We will be glad to send a trial-size can of Cocomalt free to any physician requesting it. Just mail this coupon with your name and address.

Cocomalt is accepted by the Committee on Foods of the American Medical Association. It is composed of sucrose, skim milk, selected cocoa, barley malt extract, flavoring and added Vitamin D.



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Please send me a trial-size can of Cocomalt without charge.

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*There is no Substitute
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THIS is the entrance to the Alexander Sanitarium, Incorporated, situated in Belmont, California, half a mile from Belmont Station, on Half Moon Bay Boulevard.

The Sanitarium includes six buildings, all modern, steam heated with hot and cold water in each room; some rooms have private baths and sun porches.

Features of this Sanitarium: Special attention to diets, Hydro-department with trained technicians, Electro-department with trained technicians, Occupational-department with trained instructors and psycho-therapy where indicated.

The buildings are surrounded by green lawns, blooming shrubs and shade trees of live oak, also numerous flowers and rose gardens. Inspection invited.

Address:

MRS. A. S. ALEXANDER

Alexander Sanitarium, Inc.

Phone Belmont 40, or San Carlos 40

Accredited by A. M. A.



(Continued from Preceding Page)

with an enormous task to convince government agencies of the legitimate need for funds to carry on an adequate public health program during the post-depression era. It is doubtful that a greater crisis in public health administration ever existed than faces us now. There must be no weakening upon the part of any public health officer. His duties in the protection of the public health and in the maintenance of high standards are clear. In order properly to protect the public health, a careful appraisal of resources and of future programs should be readily available. What may be immediately ahead none of us know, but it is certain that we must be alert and ready to carry on traditional service in the interests of the public at large.

Specialists in the study of child nutrition have been quick to recognize the value of milk as the mainstay of the child's diet.

"But what," asks the frantic mother of a youngster who dislikes milk, "can I do to make my child eagerly want that which he now rebels against?"

Today the doctor who is confronted with this query can solve this age-old problem by the helpful advice to mix Cocomalt with the milk. For by the simple addition of Cocomalt, milk not only becomes a delicious chocolate-flavor drink, but its food-energy value is practically doubled. Cocomalt in milk provides extra proteins, carbohydrates and minerals (food-calcium and food-phosphorus). It is also a rich source of Vitamin D.

Thus Cocomalt not only induces youngsters to drink all the milk they require—it provides extra food-

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energy value as well and a rich supply of Vitamin D. Cocomalt is accepted by the Committee on Foods of the American Medical Association.

Deaths in War and Peace.—Dr. A. Hieronymus, city health officer of Oakland, makes interesting comments relative to the number of deaths that have occurred in wars since 500 B. C., as compared with deaths from plague. He makes a similar comparison between deaths in American wars, as compared with deaths by automobiles since 1915. His statement, published in the December issue of the Oakland Health Department bulletin, reads as follows:

"Since 500 B. C., there have been 902 wars. The number of men killed in battle during those 2,433 years does not equal those killed by the rat. Yes, the old warehouse sewer rat. He has been the carrier of plague and responsible for the death of more people than all the wars. Oakland, on account of its shipping interests and its proximity to the Orient, is always a potential plague spot.

"Speaking of wars and casualties, did you know that if you sum up the number of those killed in American wars, from the French and Indian down through the World War, the total would not equal the fatalities by automobiles since 1915? Just think that over and remember that more die from tuberculosis than are killed by automobiles. All of these conditions are preventable. It costs thirty times as much to take care of the injured and diseased as it does to prevent them. Some day we will learn to use our 'noodle.' It is a poor policy to cut the budget of health and safety agencies."

They who have a good constitution of body can bear heat and cold, and so they who have a right constitution of soul can meet anger, grief, immoderate joy, and other passions.—Epictetus.

Is
Mr. Jack
Sprat
one of
YOUR
Patients?



EVEN Jack's friends will admit he's a trifle underweight. He's fussy about foods. He says he knows he could gain weight if he would drink rich, wholesome milk in addition to his meals. But he doesn't relish milk.

The flavor of milk is a deciding factor with not only the Jack Sprats. Golden State Company, Ltd., is well aware of this. That is why this Company secures its raw product from selected farms, employs trained dairy scientists to advise the dairymen in their particular problems, and overlooks nothing in the manning and equipping of its plants. Its methods are modern.

As the result of this Company's application of the findings of public research in the field of dairy science—and their amplification by Golden State's private research—Golden State Brand excels in fine flavor and high quality. You can recommend Golden State Milk to your most discriminating patients—and you can use it in your own home with utmost confidence and enjoyment.



Golden State
COMPANY, LTD.
DAIRY PRODUCTS

A CALIFORNIA INSTITUTION

Colfax School for the Tuberculous

Colfax, California

(Altitude 2400 feet)

This institution is for the treatment of medical tuberculosis and of selected cases of extrapulmonary (so-called surgical) tuberculosis.

The Colfax School for the Tuberculous consists of five Hospital Units with beds for patients who come unattended and a Housekeeping Cottage Colony for patients and their families.

The Colfax School for the Tuberculous offers the following advantages:

1. Patients are given individual care by experienced tuberculosis specialists. The patient is treated according to his individual needs.
2. Patients are taught how to secure an arrest of their disease, how to remain well when once the disease is arrested, and how to prevent the spread of the disease.
3. Patients have the advantage of modern laboratory aids to diagnosis and of all modern therapeutic agencies.
4. The climate of Colfax enables the patient to take the cure without discomfort twelve months in the year. We believe climate is secondary to medical supervision and rest, but the fact remains that it is easier to "cure" under good climatic conditions than where these climatic conditions are absent.
5. Colfax is accessible. It is on the main line of the Ogden Route of the Southern Pacific R. R. and has excellent train service. It can be reached by paved highway, being on the Victory Highway, with paved roads all the way to Colfax.

For further information address

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Colfax, California

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